Princeton Theory's Problematics

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ABSTRACT

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This dissertation situates historically a group of philosophical problematics informing a thread of post-World War II American music theory, begun at Princeton University under Milton Babbitt (1916–2011) and his students. I historicize and demonstrate the logics behind, without attempting to explain away, problematic notions from experimentalism to experience, solipsism to ethics. Initially a formalist project, Princeton Theory in the early 1970's underwent an under-discussed Turn toward experimentalism, seemingly rejecting its earlier high-modernist orientation. The dissertation situates this Turn as an auto-critique and provides a variety of hermeneutics for the Turn. I discuss how Princeton Theory before the Turn problematically situated itself as both a logical positivist or empiricist discourse, wherein musical experience plays a foundational role, *and* a formalist, conceptual, discourse, complicating the claim that Princeton Theorists were unconcerned with music hearing as such. Because musical experience seems to be personal, not sharable, I historicize Princeton Theory's uneven appeals to the notion of solipsism—that only the listening or theorizing "I" exists—and question this position's implications for ethics, arguing that Babbitt and his students have been more concerned with ethics and morality than their formalist commitments may imply. This dissertation offers a sustained discussion and critique of mid-century high-

modernist formalism, raising the stakes of our understanding of this foundational discourse for modern music theory by showing its historical situatedness, contentious status even for the practitioners involved, and what claims it may still make on our own musical imaginations.

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in memoriam Rita Rhoades Gleason

I. Defining Princeton Theory

I accept Reality and dare not question it,
Materialism first and last imbuing.

Hurrah for positive science! long live exact demonstration!

. . . . . .

Your facts are useful, and yet they are not my dwelling,
I but enter by them to an area of my dwelling.

—Walt Whitman, "Song of Myself," *Leaves of Grass*

This dissertation historicizes philosophies informing music theory as practiced by composers trained for the most part, but not exclusively, at Princeton University, from post-World War II to now. Their discourses started as high-modernist, appealing to then-latest developments in philosophy of science—verifiability, logicism, foundationalism, phenomenalism, etc.—but around 1972 took a postmodern Turn to experimental discourses about music. Unpacking this Turn constitutes Chapter Two. Chapter Three discusses Princeton Theory's uneven appeals to musical experience, as opposed to conceptual thought, yet within a music-theoretical discourse. Chapter Four historicizes, starting with Wittgenstein, Russell, and Carnap, and moving to Descartes, Husserl, and others, the problematic of solipsism, as a kind of grey cloud hanging over the music-theoretical discourse, always threatening. The last Chapter inquires into ethical considerations in their discourses: asking if solipsism can ground an ethics; discussing the fact/value dichotomy as articulated by Babbitt; and arguing that for Lewin musical analysis should be

moral. One way to describe the project is as an historicization of a thread of modernist musical discourse, but also, now, an historicization of postmodern discourse. Another way is to say that it is a collection of chapters on various problematics (experimentalism, experience, solipsism and ethics) that are operative in crucial ways within that discourse and music theory more generally.

Yet another way to describe the project, with its sonic or aural side out, so to speak, is as follows: this dissertation situates historically a group of philosophical problematics informing a thread of post-World War II American music theory, begun at Princeton University under Milton Babbitt and his students. I historicize and demonstrate the logics behind, without attempting to explain away, problematic notions from experimentalism to experience, solipsism to ethics. Initially a formalist project, Princeton Theory in the early 1970's underwent an under-discussed Turn toward experimentalism, seemingly rejecting its earlier high-modernist orientation. The dissertation situates this Turn as an auto-critique and provides a variety of hermeneutics for the Turn. I discuss how Princeton Theory before the Turn problematically situated itself as both a logical positivist or empiricist discourse, wherein musical experience plays a foundational role, *and* a formalist, conceptual, discourse, complicating the claim that Princeton Theorists were unconcerned with music hearing as such. Because musical experience seems to be personal, not sharable, I historicize Princeton theory's uneven appeals to the notion of solipsism—that only the listening or theorizing "I" exists—and question this position's implications for ethics, arguing that Babbitt and his students have been more concerned with ethics and morality than their formalist commitments may imply. This dissertation offers a sustained discussion and critique of mid-century high-

modernist formalism, raising the stakes of our understanding of this foundational discourse for modern music theory by demonstrating its historical situatedness, contentious status even for the practitioners involved, and what claims it may still make on our own musical imaginations.

More expansively still: this dissertation discusses a set of problematics in the writings of Princeton Theory—that group of composers, theorists, composers/theorists collected around Milton Babbitt (1916–2011) during the post-World War II period at Princeton University, whose main public voice became, starting in 1962, the magazine or journal *Perspectives of New Music*. We may choose to problematize any number of themes in these authors' writings, but after over a decade of study and seven publications, four themes stand out, interest me most intensely: the experimental Turn, experience, solipsism and ethics. Although located in separate chapters, I should state that these themes are interrelated: the problematic of the Turn raises the problematic of how to grasp and expand musical experience through discourse, which in its turn involves problems of who is doing the talking (and to and for whom), of the ethics of these positions, relations. How we might theoretically model pieces or speculate away from a given repertoire contorts musical experience, implying communication and yet problematizing the ready transfer of knowledge about music from one mind to another. The assertion of solipsism (methodological, epistemological, or even metaphysical) problematizes musical experience and appears to turn its back on the ethics—the sociality—of discourse and musical composition. Ethical questions seem to supervene over the others, but arise from the considered reflection upon the preceding problematics. Hence we will have occasion to revisit earlier themes during the discussion of later ones, the

disintegration of the chapters occurring as a remnant of the assertion of discursive control over lived historical practices.

This chapter seeks to define Princeton Theory in various contexts, situate my approach to the topic(s) and offer a rationale for the dissertation as a whole.

Chapter Two argues that Princeton Theory's noted but undertheorized Turn to experimentalism around 1972 in fact presents an auto-critique, seeming to overturn the logical positivism for which Babbitt had argued and into which his students had invested considerable energy. The Turn was not all-encompassing, however, as certain threads of continuity can be traced.

Chapter Three argues Princeton Theory was dialectical, ambivalent, or tense as regards musical experience, that musical experience co-existed in equal measure with conceptual thought (which we find in the motion toward theorizing), but that the motion toward the conceptual at times revivifies experience.

Chapter Four argues that solipsism presents itself as a persistent problematic for Princeton Theory's discourses by situating historically the work of Benjamin Boretz, Godfrey Winham, J. K. Randall, John Rahn, and others, via the work of Hans Driesch, Ludwig Wittgenstein, Rudolf Carnap, A. J. Ayer, and others' discussions of solipsism. This provides context for the arguments of Babbitt's ([1958] 2003) infamous "Composer as Specialist"/"Who Cares if You Listen?"

Chapter Five uncovers an ethics or morality latent in Princeton Theory. High-modernist composition/compositional theory seems anti-social, seems therefore amoral; indeed, it assumes a positivist distinction between fact and value, what is and ought to be the case. I discuss this distinction's implications

for musical discourse in Babbitt and Boretz. I argue further that Babbitt's contextuality is an ethics of the musical text/interpretation, and that later Rahn and Boretz present an ethics: works are almost identified with their authors, we should respect this closeness, and be careful in our words—not too close to cover entirely the piece's own life, implicitly, therefore too, the composer. Lastly, I argue that Lewin presents a utopian gesture to moral self-actualization through music analysis.

While I conceive of this dissertation as a history concerned primarily with metatheory (the philosophy of music theory or the analysis of theory as opposed to the more usual theory of analysis), and do not therefore address explicitly anthropology nor use its methods, it nevertheless appears impossible to bracket anthropology completely: anthropological questions weigh on the discourse, my mind. This is especially so given the historically both past and very much present times of the discourses considered, my editing roles for *Perspectives of New Music* and *The Open Space Magazine* (another organ of Princeton Theory in some of its moods), a series of pieces I have written both about and performative of Princeton Theory and as a student and friend to some of the authors here discussed (and some of their students). I say this emphatically *not* to claim authority; I say this for the purpose of full disclosure and to emphasize the degree to which I am aware that there are areas I cannot discuss, avenues I cannot travel, words too close for comfort, which may cause pain. There is always an implicit anthropology within discourse, an oral history silent in the official written history, a self-theorization occurring by the authors considered,

an insider/outsider discursive economy.[1] There are always people—alive or dead—behind words.[2] The ethnographic critique of history suggests it is merely congealed ethnography, forgetting its origins.

What, we might ask, is the received view of Princeton Theory? That is, what is its "official" history? What is the history that most non-practitioners, insofar as they are aware of this corpus of writings, assume? The main themes of Princeton Theory would seem to include logical positivism; that it constitutes itself in a difficult, perhaps impenetrable, discourse; that it is concerned with twelve-tone or serial theory; that it bridges this with compositional theory; that it is a metatheoretical as well as theoretical project; and that it is somehow unethical or amoral (insofar as it alienates itself from culture and society as a whole by assuming an avant-garde stance). As far as they go, these themes appear largely, although not entirely, accurate descriptions both as the composers/theorists represented themselves, and as we might most profitably represent them.

If a main tenet of these theorists was that their projects would be metatheoretical or "epistemologically secure musical discourse[s]" (Blasius 1997, xii), then Princeton Theory would seem utterly aware of its own moves, its implicit claims: there appear to be no subtexts to unearth. Hence I feel ambivalent about what at one time I would have taken to be the central goal of this dissertation, which was announced as a project by Joseph Kerman over twenty-five years ago:

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[1] See Taruskin (2009, 274) who attributes this position to Martin Brody, what we might consider a kind of participant-observer status.

[2] Although left unstated as such, I take this to be the main point of Rahn 2008.

> There will be a time when formalism attracts new interest and then the serial music of the postwar decades will seem like music again. At such a time, avant-garde theory will be looked at again, if not by composers and theorists, by critics and musicologists…. Musicologists will read this theory selectively and critically, paying attention to the difficult texts themselves but also to the possibly even more difficult subtexts. They will read avant-garde theory for what it reveals about the music itself, even though they know it was generated in order to create music, not to elucidate it. Musicologists, some of them, know how to read for subtexts. They have learned it from long bouts of wrestling with older theory. (1985, 106)

For "musicologists" we might substitute "historians of theory." (But see p. 60, where Kerman defines history of theory as a species of historical musicology.) This, perhaps, is my project. As always, the method is to situate historically Princeton Theory's uneven historical memory; to provide greater historical context for arguments and ideas occurring seemingly free of such context. As Kerman has also said, "Theory, like aesthetics, has to be understood historically" (Ibid., 60). Unlike Kerman, however, my purpose is to show the depth and richness of music-theoretical ideas that otherwise may seem bizarre or unmotivated. This said, I am also aware of the fear of domesticating these ideas. Let me assure readers prone to such concerns that I share them, and will try to keep things as strange as possible.

As to the title of this dissertation, the problematics I discuss (the experimental Turn, experience, solipsism and ethics) do not resolve, precisely because I refuse them closure. This seems to be a working definition of "problematic" as a noun: I, and the material, refuse resolution, rather than seeking naively or scientistically to "solve" Princeton Theory's "problems." "Problematic" as a noun was perhaps first introduced into English-language philosophical discourse in Macquarrie and Robinson's 1962 translation of

Heidegger's *Sein und Zeit*, wherein Heidegger uses "Problematik" repeatedly, and seemingly free of theory—it appears untheorized in that work. Interestingly, his first use of the notion in that work comes in reference to the theological problematic, (Heidegger [1927a] 1962, ¶3) and "problematic" seems to identify an interrelated complex of problems, a system or range of problems, or the totality thereof—a problem, after Aristotle's *Problems*, being a question posed for discussion, beginning with the word "why."[3] Why, then, did many of the Princeton Theorists Turn to experimental discourses? Why do their discourses—both before and after the Turn—appear both so concerned with experience and conceptual thought? Why do the Princeton Theorists appeal to the social isolation implicit in the notion of solipsism? Why do the Princeton Theorists begin with a positivist disavowal of ethics, yet after the Turn seem to embrace it? As I conceive the project, discussing these questions involves holding their answers in tension; as Frederic Jameson says, "This [dialectical process] can be imagined as a series of interlinked problems or paradoxes, which, ostensibly solved, give rise to new and unexpected ones, of greater scope" (2011, 3). I will essay throughout, but not argue, that the overarching problems or paradoxes of greater scope, the problems that unify the problematics I do discuss, are those of intersubjectivity (self and others), music-theoretical temporality, and of the relations between language and music.

If there is one moment that started Princeton Theory as we now know it, that moment would be the Princeton Seminar in Advanced Music Studies, which

[3] Aristotle (2011, xiii). Husserl uses "Problematik" slightly later than Heidegger, in the *Cartesian Meditations* ([1931] 1999), wherein it is often translated simply as "problems," but often within the locution, "Die konstitutive Problematik."

convened between August 17 and September 5, 1959, with funding from the Fromm Music Foundation.[4] In January of the same year, Vladimir Ussachevsky (1911–1990), Otto Luening (1900–1996), Roger Sessions (1896–1985) and Babbitt founded The Columbia-Princeton Electronic Music Center with a five-year grant from the Rockefeller Foundation, in the amount of $175,000 ($1,384,845.36 in today's money, according to the U. S. Dept. of Labor Statistics) for both universities (See Babbitt [1960] 2003, 74–6 and Patterson 2011, 490). If everything that begins must come to an end, then we can posit the *Abendrot* of Princeton Theory to have occurred as a result of the critiques leveled by Brown and Dempster (1989). For thirty years, then, Princeton Theory sustained a highly productive level of discourse. If, however, we acknowledge that Princeton Theory anticipated many of Brown and Dempster's critiques (as we shall have occasion to say in this dissertation), and we read *Perspectives of New Music* as the principal organ of Princeton Theory, then we can argue that Princeton Theory continues, in some form, to this day.

This dissertation does not seek, however, to discuss what we might term the prehistory of Princeton Theory, whose origins we might locate with the arrival of Babbitt at Princeton as professor in 1938.[5] We know that Babbitt and Edward T. Cone (1917–2004) earned the M.F.A. at Princeton in 1942. We know

[4] Lang 1960 collects papers read at the conference; see also "Music Seminar Planned" 1958, Cohen 1960 and Gamer 2012.

[5] Babbitt states that he was originally to be appointed in 1937, but that his appointment was delayed for a year because the chair of the department was concerned with appointing a Jew during the first year of the department's existence. See Hilferty and Karpman (2011, c. 9:00) and, for context, Karabel 2005.

that Babbitt taught mathematics to engineers at Princeton during World War II and at the same time commuted to Washington, D.C., to work on still-classified projects.[6] We know that Babbitt wrote his thesis in 1946, in Mississippi, because he could not compose, because he was feeling very decomposed after the War (Zuckerman 2002, n.p.). We know that Peter Westergaard (1931–) received his M.F.A. at Princeton in 1956, and that Godfrey Winham (1934–1975), J. K. Randall (1929–), and David Lewin (1933–2003) graduated together in the same M.F.A. class at Princeton, two years later.[7] We do not have much of a sense of the texture, however, of Princeton Theory between 1938 and 1958, again, what I am calling its prehistory—the seminars offered, readings, pieces analyzed, a sense of a larger program. Martino (2002) reports that, "Milton's 1952 lectures covered only hexachordal all-combinatoriality, and that only cursorily. Great teachers do not tell all." (See also, Martino 1961.) We know that what became known as the "Mallalieu Row" was of special interest when, in 1954, its namesake Pohlman Mallalieu devised it. (See, "Set Puzzle Solution" 1976, and, most recently, Morgan and Davis 2009.) However, there is no record of Babbitt publishing an article until 1949, with one on the string quartets of Bartók in *The Musical Quarterly* (Babbitt [1949] 2003). We know Babbitt's articles after that date, prominently the ([1952] 2003) review of Salzer's *Structural Hearing*; "Some Aspects of Twelve-Tone Composition" ([1955] 2003); and the infamous, "Who Cares if You Listen?"/"Composer as Specialist" ([1958] 2003). Although perhaps

[6] Justin Hoffman and I are engaged in an ongoing project of declassifying this information and discovering exactly Babbitt's role in the war effort.

[7] See Blasius (1997, ix). Randall amusingly refers to the three as a "good crew" (Randall 2011, disc 2, c. 44:00).

its originator, hence we can read the early Babbitt articles along with his ([1946] 1992) dissertation as indicators of this prehistory, and although every informant I have spoken with emphasized Babbitt's personal and intellectual centrality for Princeton Theory, we should not identify Princeton Theory with Milton Babbitt completely.[8]

As to a definition of Princeton Theory proper, most music scholars and general readers aware of new music are also aware of Milton Babbitt and his importance.[9] But general histories rarely mention that Babbitt's students were engaged in a music-theoretical project and that together they constituted, no matter how ambivalently, a "school." While not monolithic, and at Princeton to create as much as be created by it (Boretz [2001b] 2003, 445), the group of students shared overlapping interests and even beliefs and practices: avant-garde composition, twelve-tone and serial theory, Schenkerian theory, and a meta-theoretical or philosophical component of their discourses.

Indeed, already in 1963 Joseph Kerman could define a "Princeton School" of composers whose discourse appeared in the pages of *Perspectives of New Music*, one year after the journal's founding. According to Kerman (1963), the Princeton School of contemporary composers was the most significant in America at that time; it was conservative in the German sense, meaning it admired the compositions of Mozart, Bach, Beethoven and Brahms, to which the School added twelve-tone composers and Roger Sessions; the School was anti-historical

[8] For further background, see Brody 1993, Harker 2008, Girard (2007, 168–84 and 202–19) and Girard 2008 and 2010.

[9] See, e.g., Ross (2007, 303–307). On "new" music, see especially Adorno ([1949] 2006, xxvii, 9, 13, 24, 47–8 and 81–2).

or ambivalently historicist; respectful of performers; it took Schenkerian analysis to be compositional; and "recently a mathematical strain of thought has been growing very prominent" (Ibid., 152–53). Although polemical and intended to be dismissive, I think there is more accuracy in Kerman's characterization than many would like to admit. It is understandable that someone predisposed to find fault could so conceive of the Princeton School.

Princeton Theory, then, was music theory created by a "school" of composers, trained largely, although not exclusively, at Princeton University. The patronage of new music composers by the university was seen as a new and revolutionary occurrence, displacing traditional sources of funding such as the aristocracy, governmental agencies, the public at large, or private interests in the sense of businesses. Babbitt ([1958] 2003, 53) famously championed this new interpretation of the academic composer: "Such a private life is what the university provides the scholar and the scientist. It is only proper that the university, which—significantly—has provided so many contemporary composers with their professional training and general education, should provide a home for the 'complex,' 'difficult,' and 'problematical' in music. Indeed, the process has begun." Later, Babbitt adds, "The university is the best of all available worlds" ([1970] 2003, 261). Arthur Berger (1912–2003) suggests that before Babbitt and new music composition entered the university in full force, the notion of an academic composer carried a different sense:

> Another semantic problem arises with the assimilation of "modern," a concept notorious for its aggressive innovation, to "academic." Since in the twentieth century "academic" long signified composers who had persisted in pursuing the well-worn paths of nineteenth-century Romanticism, which posed no problems to either composer or listener, it

> is paradoxical to find the label applied to composers who do pose a challenge, whose work was (and still is) less accessible to average listeners than most music they hear. The serialists were not called "academic" simply because academe was now their haven (though that helped). By throwing in epithets like "austere" and "arid," critics left no doubt that they were giving their impression of the music and pointing to serialism's reputation for being cerebral and systematic as well as without feeling. (Berger 2002, 100)

And so the notion of "academic" composition appears to be a music-critical category, performing functions not necessarily sanctioned by the practitioners.

While the above discussion by Babbitt affords us an understanding of the rationale for composers choosing the university, Boretz here offers a description of the locus of composers as the fount of intellectual musicianship during the 1950's; that is, that composers specifically would be the theorists and musical thinkers chosen by the university:

> Schenkerian theory was first promoted by Roger Sessions and elaborated by Milton Babbitt and Edward T. Cone as a matter of intellectual and musical conviction. Arthur Berger promoted the aesthetic theories of D. W. Pratt and greatly elaborated the theoretical ideas of Nadia Boulanger as well as the philosophies of people like R. G. Collingwood and T. E. Hume [sic], not to mention Whitehead and Dewey and Bergson. If you were a music student in the 1950's, it would only have been from composers that you would have been made aware of these thinkers, of the notion of "musical thinking" as such, or of theory as an intellectual and crucial compositional issue. (Pasler 2008, 334)

This historicization partially supplies, in retrospect, a sense of a larger program for, if not Princeton Theory specifically, then certainly modern compositional theory generally or the emerging original ethos of *Perspectives of New Music*, as Boretz experienced it. Indeed, the phrase, "if you were a music student in the 1950's," implies precisely the folding into academia of composers and their concerns.

Leslie Blasius (Ph.D., Princeton, 1994) discusses five disciplinary factors in the late 1950's which had to be in place for Princeton Theory to come into being, and which partially define it: "[1] the establishment of historical musicology as an autonomous, scientific, and professionalized discipline… [2] the growth of a theoretically aware compositional community… [3] the introduction and dissemination of Schenker's analysis of music (with its claims to displace a more impressionistic or heuristic critique of musical works)… [4] the availability of various analytic tools in contemporary writings on logic and mathematics… and the fifth, the advent and promise of electronic computation" (1997, 1). Blasius further glosses these characteristics by implying the ambivalent tension of Princeton Theory in relation to historical musicology, the creation of a metalanguage with which to scrutinize musical structure, and the reconstruction of the foundations of music (Ibid.). The latter two we shall explore in detail during this dissertation.

Blasius' discussion appears fairly removed from the five-part plan which Allen Forte set forth in 1959, however. This platform would go on to define Yale Theory, and to a large extent, what we might term normal music theory: "1. Constructing a theory of rhythm for tonal music…. 2. Determining the sources and development of triadic tonality…. 3. Gaining information about compositional technique…. 4. Improving theory instruction…. 5. Understanding the structure of problematic modern works" ([1959] 1977, 24–34). While Blasius tells us the conditions of possibility for a music-theoretical discipline to emerge either at Princeton or Yale in 1959, Forte assumes this discipline and sets forth his program. This said, if the mainstream or normal theory of music theory from that time until perhaps the early 2000's involved discussion of "Schenker and

sets," then we should question whether Princeton Theory in its formalist heyday was so far removed from this normal theory. In some measure the project was to generalize set theory and formalize what was perceived to be the systematic inadequacies of the late Schenker. Add to this a meta-theoretical component, and we have Princeton Theory. Perhaps, then, the meta-theoretical or philosophical component was the only genuine difference between Princeton Theory and normal theory.[10]

While some of the above characterizations apply to Princeton Theory after around 1959, as stated, around 1972 the discourse began to include what we might call autobiographical musical criticism, expressed through extravagant, performative, texts. Princeton Theory, before this Turn (which I historicize and theorize in Chapter Two), often goes by different names: avant-garde theory, modernist or high-modernist, formalist, or compositional theory. We shall treat each of these appellations at some point in what follows, but perhaps what defines Princeton Theory generally more than anything was precisely its ability to Turn, and this Turn was from discussions of forms sounding in motion to an even more private discourse. Perhaps the Turn *defines* Princeton Theory, and as such shows the degree to which, unlike normal music theory, which to this day commits itself to formalism, Princeton Theory was able to anticipate the New Musicological critiques by showing its concern with the subjective and even the social. One way of reading the entire dissertation, then, is as an attempt to come to grips with the Turn, for all of the other problematics I discuss (experience,

[10] How much normal theory stands for Yale Theory I shall not venture here; Wason (2002, 72) believes it does in large measure: "But ultimately, it was the Yale model of the academic music theorist that seems to have taken root during the heady expansion of North American university programs in the 1960's and 1970's."

solipsism, and ethics) are cut across by this Turn—hence also its presentation first among the following chapters.

I should emphasize here that Princeton Theory is diasporic: although most, but not all, of the Princeton composers/theorists actually studied at Princeton University under Babbitt, Princeton University's composition department as an institution has moved away from the high-modernist/experimental dialectic that identifies much of Princeton Theory pre- and post-Turn. This diasporic condition of Princeton Theory is one of the reasons we can use *Perspectives of New Music* (and, indeed, *The Open Space Magazine*) to define it. Princeton Theory is thus a community of choice, not all of whose members actually attended Princeton University.

Stepping back in time, and as a motion toward further specifying Princeton Theory, let us mark the limits between the Princeton School and the work of the Darmstadt School of composers/theorists located at Darmstadt, Germany, collected during summers beginning in 1946, and publishing in *Die Reihe: Information über serielle Musik* between 1955 and 1962 (in English translation between 1957 and 1968).[11] That the Darmstadt composers, such as Luigi Nono (1924–1990), Karlheinz Stockhausen (1928–2005) and Pierre Boulez (1925–), would be known generally as a school, reified as such by Nono in 1958, but the Princeton School would be reified in the person of Milton Babbitt, would seem to represent a kind of anti-Americanism on the part of the musicological imagination, prioritizing the European avant-garde. Avant-gardism is to be respected in Europe—that is its tradition—but not in the United States—whose

[11] Heile 2004 compares the two, but does so in pursuit of a critique of the New Musicology.

traditions prioritize popular musics and jazz. The United States lacks an indigenous classical musical culture. Babbitt will then be accepted in place of his students, and the whole marginalized so as not to demand too much cultural imagination or attention, except as foils for the construction of twentieth-century music in the United States. (Girard 2010 politicizes similar conclusions.)

For Richard Taruskin (2005, 135–36), Princeton Theory and that practiced at Darmstadt differed critically: "Darmstadt serialism was the fruit of pessimism, reflecting the 'zero hour' mentality of war-ravaged Europe. It thrived on the idea of the cleanest possible break with the past. Princetonian serialism reflected American optimism. It rode the crest of scientific prestige and remained committed to the idea of progress, which implied the very opposite attitude toward the past: namely a high sense of heritage and obligation." If for Darmstadt Theory, Zero Hour (*Stunde Null*) devastation represented a starting-anew, with denazification and literal rebuilding mapped onto the utopian spaces of musical rebuilding, then Princeton Theory would not experience a need to begin from a *tabula rasa*, would, instead, experience the utopian spaces of the ticker tape parade but eventually the Cold War, space race, communist purges, and burgeoning civil rights movement.[12] Unlike German composers, who had to forget a past too painful to remember, composers in the United States had to reach into the past in order to continue into the future. Babbitt time and again emphasized the intellectual and personal migration from Germany to the United

[12] Most German scholars now argue that the Zero Hour never actually occurred, choosing instead to discuss the notion of *Vergangenheitsbewältigung* (coming to terms with the past), but given its impact on historiography of the period, it is important to evoke it. See Grant (2001, 17–20), Beal (2006, 11–18), and Brockmann (2009) for critiques; Fox (2007) deploys the former category for his discussion.

States (see, Babbitt [1955] 2003 and [1999] 2003, 471–73 and 481–85). Although not ideologically neutral, Babbitt always stressed the *continuities* between Schoenberg, Webern, and Stravinsky and his own practices. Indeed, the first issue of *Perspectives of New Music*, "devoted considerable space to a problem that seriously concerned composers for centuries, and that has been attacked with particular ardor in the last decade or so: the relation of the contemporary composer to tradition" (Berger and Boretz 1962, 5). If Boulez could proclaim Schoenberg dead, ([1952] 1991) Babbitt knew only too well, and mourned his passing.

Amy C. Beal discusses Babbitt's less than well-received 1964 trip to Darmstadt, mentioning that Babbitt felt the Darmstadt composers had, "no knowledge of the theoretical-analytical writings of his Ivy League colleagues, and their disinterest in American academic composer-theorists irritated him immensely" (2006, 140). As Boretz says, "If the editors of *Die Reihe* had, say, not been so implacably unfriendly to our interests we might not have been so alert to the deficiencies in their discourse" (Berger and Boretz [1987] 2003, 243–44). Boretz is referring specifically to Backus (1962), a scientific critique of *Die Reihe* printed in the first issue of *Perspectives of New Music*. Although polemical, it is balanced by Stockhausen (1962), an article appearing in that same first issue. Additionally, later in the 1960's Iannis Xenakis (1922–2001) submitted a paper to *Perspectives of New Music*. Boretz accepted it with the provision that it be edited by an expert in the field—a form of peer review—to which Xenakis responded less than favorably, withdrawing his submission (Berger 2002, 141 and Berger and Boretz [1987] 2003, 250). Unlike Princeton Theory, Darmstadt composers seem never to have taken an experimental Turn, this despite the influence of

Cage (Iddon 2013). Cage is narrated as *ending* Darmstadt Theory, not causing a Turn at Darmstadt. Indeed, the founding of the *Institut de Recherche et Coordination Acoustique/Musique* (IRCAM) in 1977 can be read as a retrenchment. This said, Adorno (1965–1966) was published in translation in *Perspectives of New Music*; Adorno ([1969] 2002) treats themes similar to Princeton Theory (Schenker and Schoenberg, composition as analysis, what Babbitt calls contextuality; see also, Adorno [1949] 2006, 81–2); and the Stockhausen *Gedenkschrift* in the 2012, 50th Anniversary double-volume of *Perspectives of New Music* figures as its own attempt to work through the past.

Having further specified Princeton Theory by way of its tense relation with Darmstadt Theory, I am interested now in writing through the notion of "compositional theory" as distinct from other forms of music theory, because that is the most common appellation for Princeton Theory, its more general category, because compositional theory seems distinct from normal theory, and because compositional theory seems to have perished—so few practice it today that it is difficult to remember with any clarity what it once was.[13] What, then, *was* compositional theory? A trivial definition is that compositional theory is whatever theory composers create, but this definition is less trivial than it may at first seem, because it focuses our attention on the ideological component of "being" a composer—a person who puts sounds together. It claims that the identity of the theorist *qua* composer is important, defining, even if otherwise the

[13] In the recent 50th Anniversary issue of *Perspectives of New Music* a number of interviewees voiced concern over this issue. See, Rahn (2012, 55); Morris (2012, 71 and 78); Dubiel (2012, 88–91); Kielian-Gilbert (2012, 104); Cory (2012, 148–49); Lansky (2012, 179–81); and Scotto (2012, 217–18), among others.

discourse is not as different in theoretical or analytical practice, a position which, for example, Joseph Dubiel (Ph.D., Princeton, 1980) has problematized recently (2012, 90–91). Indeed, an expansive definition of composition guides Joel Lester's monograph, *Compositional Theory in the Eighteenth Century*. (Lester graduated with the Ph.D. from Princeton in 1970.) In the following definition, "composition" stands in for compositional theory, "to the extent that it can be separated from speculative theory, aesthetics, or performance theory" (Lester 1992, 5). I want to pause here to mark Lester's reticence to separate compositional theory from these other discourses—the separation appears to be a condition of modern disciplining of musical discourses.[14] Even still, "Composition is construed here rather broadly to include everything from musical rudiments, intervals and chords, the study of harmony and voice leading, considerations of melody, musical phrasing and form, and the actual process of working out a composition" (Ibid., 6). This, we might say, is the most expansive and yet empirical understanding of compositional theory available, pre-Schenker: formalist but useful for Lester's project of understanding the practical or pedagogically applicable music theories from that century.

Kerman (1985, 90–1) argues that (high-)modernist compositional theory's roots lie early in the last century, in Schenker's project and Schoenberg's *Harmonielehre* ([1911] 1978). Hence, what we might call the Received View of music theory in the twentieth century reduces, again, to "Schenker and sets"—sets, in this reading, being an extension of Schoenberg's compositional practice.

[14] See, for example, Blasius (2002, 43) which discusses Guido Adler's map of the musical disciplines, and Girard (2007, 185–327) on the institutionalization of music theory at Princeton and Yale Universities.

"Unlike tonal theory," however, "compositional theory is valued primarily for what it enables the theorist to do as composer of new music, only secondarily for what it tells him or anyone else about music already composed." This definition emphasizes the pre- (or proto-) compositional component of compositional theory. But Kerman continues with the ahistorical, condemning, lines: "therefore its relevance to anyone but the composer-theorist and his circle of associates is limited" (1985, 94–5). Whether or not this is actually so, we should complete Kerman's unthought thought, which is that "new music" becomes its own corpus, able to be studied using the theories constructed for it, making claims to a broader public than Kerman might like to admit.[15] "Precompositional" theories can become "post-compositional," for want of a better word. Kerman (Ibid., 95) inherits a nineteenth-century conception of the artist which denies that knowledge and creation can take place in the same moment, in the same act.

Perhaps the most sophisticated explication of the differences between compositional music theory and normal music theory, and a kind of response to Kerman, takes place in Blasius (2002). Implying a notion of precompositional theory and using the language of Seeger (1958)—which Kerman (1985, 94) adapts and suggests was introduced into music-theoretical discourse by Cone (1959, 37)—of a distinction between prescriptive and descriptive theory, Blasius implies an alignment with compositional and normal music theory, respectively, and unpacks the differences with reference to Babbitt and Princeton Theory's formalist project and Schenker's own project, this latter *contra*-Kerman and the usual reading of Princeton Theory:

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[15] Recall, however, that Kerman (1985, 106) does admit that there will come a time when, "serial music of the postwar decades will seem like music again."

> The domain of the transcendental might further be parsed into two mirroring regions, one prescriptive and *a priori* and the second descriptive and *a posteriori*, both of which admit a constellation of theoretical constructions. The first (*a priori*) kind of prescriptive theory admits such music theories as derive from constructivist formalism. For an example, the equally tempered diatonic collection can be characterized by a specific property; after Milton Babbitt, it can be said to exhibit a unique multiplicity of interval classes. Given this fact, one might generalize a sequence of axioms and theorems revealing further properties, and possible compositional uses for these properties. Yet this analysis stands before any particular empirically accessible mechanisms of perception, or any historical or cultural theorization or compositional manifestation of the diatonic collection.
>
> The most influential exemplar of the second (*a posteriori*) sort of descriptive theory is given in the mature work of the early twentieth-century music theorist Heinrich Schenker. Schenker's early theoretical work concentrates on the affectual psychology of harmony and counterpoint: the latter, in particular, comes to be seen as a pedagogical laboratory within which the affect of music can be studied…. In Schenker's later work this reconstruction of counterpoint is synthesized with a consistent narrative of the history of music, one which sees a unique conflation of contrapuntal and diminutional techniques in the works of the German instrumental masters. Hence the command of musical psychology and the plotting of a particular historical trajectory produce between them the analysis of the transcendental masterwork. (Blasius 2002, 42–3; see also Babbitt [1965] 2003, 195, and Blasius 1996, 107–14)

As with Lester, in Blasius' discussion, compositional theory shades into speculative theory, a motion to which we shall return. We might be surprised to read Blasius' ahistoricism here, because we could always argue that precisely because Babbitt "invented" the principle of the unique multiplicity of interval classes within the diatonic collection, it is cultural through and through. A fair amount of cultural work went into the notion of an interval class, even.[16] Blasius knows this, however, and is articulating the tension between historicizing theory

[16] See, for example, Babbitt's discussion of interval classes ([1960] 2003, 57 and 62–3), and Schuijer (2008, 37–40), who discusses Forte's 1964 definition of interval class.

and unpacking theory's claims to transcend history. I do not want to obfuscate Blasius' important and subtle distinction, however, between normal and compositional theories, a distinction which helps us specify compositional theory with more precision, and, hence, Princeton Theory. Specifically, Blasius describes many of Princeton Theory's high-modernist projects when he extends the discussion to the point where, "one might generalize a sequence of axioms and theorems revealing further properties, and possible compositional uses for these properties" (Ibid.). As we shall see, many Princeton Theorists—including Lewin, Winham, Randall, Michael Kassler, Boretz and John Rahn—took up Ernst Krenek's suggestion to do just that, to create an axiomatic musical system.[17] Indeed, Babbitt ([1961] 2003, 79) would later claim that this is precisely what a musical theory *is*. After all, Schenker's theory, "is a theory; it can be formalized" (Babbitt 1987, 175), the implication being it *should* be formalized. (Additionally, in Chapter Three we shall consider Princeton Theory's engagement with what Blasius here terms a prescriptive and *a priori* music theory, and its problematic relation with the descriptive and *a posteriori*.)

By the time Dubiel ([1999] 2001) discussed his own work as a composer, theorist, composer/theorist, he saw fit to problematize the alleged problematic of the composer/theorist. He asserts: "The combination of activities is as natural as can be: wanting to write music has always involved wanting to explore ideas about how to write it and how it is heard…. *Somebody* sees an issue with the combination, though" (262, emphasis original). That somebody, Dubiel strongly implies and indeed cites shortly thereafter in a footnote, is Kerman. Further,

[17] See Krenek ([1937] 1977, 80–1) and, for discussion, Schuijer (2008, 254 n 20) and Derkert (2007, 227–35).

Dubiel takes offense at the implication that the composer/theorist is, "too intellectually concerned to be a real composer, yet too uncritical to be a real scholar" (Ibid., 263). The remainder of Dubiel's essay involves a detailed and continuously illuminating exploration of the phenomenology of listening *qua* composing, drawing distinctions but faintly imagined beforehand.

This dissertation presents a history of ideas, and as such during much of it I shall be concerned with the history of especially twentieth-century philosophy as it informs Princeton Theory's projects: this will involve discussion of logical positivism and the analytic or Anglo-American traditions of Carnap, Wittgenstein, and Russell, among others, as well as the continental traditions of, for example, Husserl and Heidegger. To the extent I discuss both traditions, the dissertation pivots uncomfortably between the analytic and continental modes of thought. While in order simply to understand Princeton Theory in its high-modernist phase of engagement with logical positivism and analytic philosophy, I have had to immerse myself in those discourses, to draw close sympathetically those ideas, nonetheless continental ideas can be read to inform Princeton Theory after the Turn, and, indeed, I am myself more disposed to continental thought. The nature of the bifurcation between analytic and continental traditions of philosophy has been discussed in the literature (see e.g., Dummett 1993), and so rather than attempting to spirit away the tensions between the two, the dissertation seeks to increase their urgency, for I feel them intensely.

This said, as with the Whitman epigraph, Mailman (1996), and Girard (2010), I should emphasize that appeals to philosophy do not determine the content of the music-theoretical literature. Theorists can make a range of appeals to scientific and philosophical discourses, thus I do not assume that a given

proposition within philosophy of science determines that proposition's truth value within music theory. We cannot assume a one-to-one mapping. This is the main complaint I have with Davis (1993, 10–60) and Brackett (2003, 1–83): Davis reads philosophy of science supervening to such a degree over Princeton Theory that the mere appearance of logic in the latter discourse leads him to the conclusion that there could not be appeals to experience within analysis. Although illuminating and uncovering a certain logic in Babbitt's metatheoretical writings, Brackett reads those writings too closely in step with the Received View of Scientific Theories (Suppe [1973] 1977), assuming a discursive transparency and coherence Babbitt and Princeton Theory as a whole do not, in my reading, evince. Music theorists (or composers *qua* theorists) put scientific theories *to use*; we can think of music theory in this mode as applied philosophy. This implies particular ends, particular changes in the initial conceptions, and therefore a degree of indeterminancy between philosophical input and metatheoretical output. (It would be an interesting project to track these changes, but a degree of this will occur here.) Additionally, it overlooks the personal quality of these uses, qualities which must be unpacked at each turn.[18] On the other hand, in defending Princeton Theory against critique, Mailman (1996) purposefully underestimates the power and sophistication of its involvement with (nearly) contemporaneous problems in philosophy of science. This dissertation seeks to chart a middle course between this Scylla and Charybdis of philosophy and music theory. That is, assuming music theory and philosophy are separate pursuits.

[18] Randall ([1967] 2003, 144–150), Boretz (1969, 1–8 and 20–70) and Boretz ([1970] 2003) are informative here.

Finally, why discuss Princeton Theory, as opposed to, say, normal theory? What is the rationale? Princeton Theory appears to be a lost tradition, to have been displaced by normal theory. As discussed, insofar as Princeton Theory was *compositional* theory, it appears lost. Further, we shall find time and again that Princeton Theory seems misunderstood, caricatured in the music-theoretical or musicological discourses generally. We can often detect here a kind of suppressed fear, and yet admiration. Princeton Theory often evokes emotional reactions in scholars, which is especially interesting if we allow the possibility discussed earlier, that Princeton Theory might not be so different from normal music theory after all. In terms of our disciplinary moment, as music theory moves ever closer to music cognition—as it creates itself in that image, as a growth industry, and courts the utopian hills from which the money flows—the unique hearings and theorizings of the autonomous, charismatic though disciplined listener, will be lost: precisely the tradition, Bourgeois perhaps, which Princeton Theory presents.

The most general goal of the dissertation is both to clarify and critique: to clarify Princeton Theory's often difficult texts and subtexts, but also to intensify the tensions inherent in these problematics, to intensify their urgency, and to problematize our sometimes uncritically accepted assumptions about what music theory is, its history, how it can function, what it can mean and its importance. Further, we can conceive of this dissertation as answering the question, for a broader audience than solely music theorists, what *was* formalism? This search, then, understands the historicization of music theory as a formalist discourse reliant upon its own blindness to its cultural encodings: the discovery of precisely those cultural encodings. In this sense, this dissertation

contributes to the rethinking of logical positivism, (high-)modernism, and postmodernism generally. For many, history is selective and artificially linear, but for Walter Benjamin, for example, history is a kind of picking through the ruins of a newly passed discourse. Princeton Theory as a topic of study at this point in time unites new music with the history of theory—a seeming paradox. As a practice, it is just out of fashion, is just passed or past enough to be history in some sense, and yet not wholly past: it appears at the perfect spacing from the present moment to provide some sort of critical leverage into our own moment. "Fashion is its most evocative in an imagined, 'dated' condition. The 'clothes of five years ago' (as Benjamin postulates vis-à-vis surrealism…)—that is, the expression of a past that has just ceased to be fashionable—are the ones fueling the imagination and phantasmagoria necessary for Benjamin's individual historiography" (Lehmann 2000, xviii; see also pp. 290–99).

II. The Turn

Willard: And, uh… that your methods were unsound.

Kurtz: Are my methods unsound?

Willard: I don't see… any method… at all, sir.

—*Apocalypse Now*

Polonius. [*Aside*] Though this be madness, yet there is method in't.

—Shakespeare, *Hamlet*

Would you agree that a noun is just a placeholder for adjectives?

—J. K. Randall, "Intimacy—A Polemic"

As discussed during the last, introductory, chapter, the post-World War II era in the USA saw the emergence of an intense new strain of composing music, begun by Babbitt and students collected around him, at Princeton University. This high-modernist project also produced writings about music aspiring to the verifiability or corrigibility of scientific discourse, embodying the then-latest developments in science, philosophy, and linguistics. By the 1960's Princeton was the American center of avant-garde music composition, or, by extending to include electronic music and a certain geographical imagination, Princeton and Columbia Universities and uptown Manhattan—comparable to Darmstadt in the cultural imagination. Supporting the composition was the theory and a discourse purportedly rid of subjectivity, and projected through the journal *Perspectives of New Music* (1962–current). The notion of there being such a thing

as "Princeton Theory," as distinct from other forms of music theory, has been with us for many decades, for as discussed in Chapter One, Kerman (1963, 152–4) defined and problematized a "Princeton School." Additionally, Blasius (1997, 2) reports Godfrey Winham's (1934–1975) unfortunately undated response to "a prospective 'Princeton issue' of the *Journal of Music Theory*"; and Kerman's (1985, 60–112) critique can be read largely as a response to the composers/theorists working at Princeton—Kerman's own *alma mater* (Ph.D., 1950). It is difficult to overestimate the importance of Princeton Theory's writings for a vigorous engagement with the image of music (theory) as a science, with musical discourse purified of "incorrigible" personal criticism, hermeneutics.

But around 1970, something happened. The sustaining premises of music theory as a scientific pursuit were challenged by some of Babbitt's own students, prominently, Benjamin Boretz and J. K. Randall; writers for *Perspectives of New Music*, e.g., Elaine Barkin; and, eventually, some of their students. A drastic Turn occurred, a Turn away from the scientific ideals of the previous discourse, from Enlightenment rationality, and toward a phenomenological discourse; a motion toward first-person narratives; toward pragmatism; toward the feminine, queer; toward language as a music; toward a leveling of the distinction between creation and criticism; a search for poetics; toward, in short, the experimental.[1] The Turn had occurred.

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[1] Additionally, a number of watershed events transpired, for which I have never made causal claims: many of the original board members resigned from *Perspectives of New Music*; Paul Fromm pulled funding from the same (see Berger 2002, 146–47); Robert Ceely (1972) called for the resignation of Boretz from *Perspectives of New Music*—the very journal he founded—in its tenth anniversary issue; Boretz and others were denied tenure at Columbia (see, "A Columbia Group Bids 4 Get Tenure" 1971, Wuorinen 1971, and Deaver 1993, 51–53). I shall, however, make causal claims for Randall's publication of *Compose Yourself—A*

As to the historical significance of the Turn, it is difficult to overemphasize the degree to which the Turn presented a shock, occasioning aporia: it seems to be a disavowal of everything for which Babbitt had argued, a revaluation of all previous values. (See Berger and Boretz [1987] 2003, 252–54 for discussion.) Indeed, the recent 50th Anniversary Issue of *Perspectives of New Music* (50/1, 2012) can be read easily as an attempt to come to grips with the Turn, forty years later. I would like to claim further that critiques of Princeton Theory that ignore the Turn and solely discuss its high-modernist moment must seem belated, must seem to have missed the internal or auto-critique the composers/theorists themselves leveled, must seem to have created their own foundation myths in order to proceed.[2] As an example of the continuing presence of the impact of the Turn even within Princeton Theory itself, at the Princeton University release of *The Collected Essays of Milton Babbitt* (entitled "Re-reading Babbitt: The Composer as Author," December 5, 2003), none of the initial figures we associate with the Turn—Barkin, Boretz, or Randall—were asked to present papers or reflections (Carey n.d.). Randall did not attend in protest. When asked as to why the organizers had not invited Randall or Boretz or Barkin to present, the conveners said they had always assumed that the Turn had alienated Babbitt from his students. (Personal conversation with Benjamin Boretz; we shall return to Babbitt's perception of the Turn.)

The primary goal of this chapter is to situate the Turn historically, specifically as an experimental discourse, an historicization which has not been

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Manual for the Young ([1972] 1995) and its influence on the Turn, as has Berger (2002, 148).

[2] See, for example, Nattiez ([1987] 1990, 166–67); McClary ([1989] 1997); Brown and Dempster (1989); Hubbs (2004, 162–65); and Taruskin (2005).

carried out before. Toward this end, I first characterize in greater detail Princeton Theory's high-modernist moment, and then situate Princeton Theory's high-modernism against a strain of the history of philosophy (Carnap's *Aufbau*), and high modernism in the arts generally. Secondly, I shall discuss further the manifestations of experimentalism as they have occurred within American music. I then show Princeton Theory's participation in this movement and discourse after the Turn, by tracing the ways in which other writers—largely, members of Princeton Theory themselves—have retroactively figured or historicized the Turn. This will involve a characterization of the field's projects both before and after: a kind of reception history. Thirdly, I shall suggest my own readings of the Turn. I shall do so by characterizing Princeton Theory's experimental phase as a collapse of the meta-/object-language distinction in its discourses. I also characterize the Turn as an engagement with Martin Heidegger's concern for an already temporalized being, and a Derridian critique of the metaphysics of presence. I then discuss the *continuities* between Princeton Theory's high-modernist and post-modern or experimental phases, for lately (indeed, after Babbitt's passing) a counter-discourse has arisen, challenging if not the fact of a Turn, then at least the degree to which it overturned Princeton Theory's previous values. I end with my own experimental reading of sections of J. K. Randall's *Compose Yourself—A Manual for the Young*, again, the most important early document in Princeton Theory's Turn. I do so because solely to write conventional discourse about experimental discourse is ideological. This chapter will be incomplete: I cannot possibly cover all of the manifestations and ramifications of the Turn here, and I do not explore here possible broader socio-economic reasons for it (the Vietnam War, Late Capitalism, the Stonewall Riots,

May 1968, Kent State, Second-Wave Feminism, etc.). This discussion appears early in the dissertation because the Turn cuts through or inflects the remaining problematics, and therefore in some sense the entire dissertation can be read as inflected by, responding to, and attempting to historicize Princeton Theory both pre- and post-Turn. That is, one way of reading this dissertation is as exploring the Turn through the problematics of experimentalism, experience, solipsism and ethics. The Turn was, in a word, an event.

But of course the language of a "Turn" carries its own discursive history, a filiation specifically with the linguistic and postmodern turns, and Heidegger's *Kehre*.[3] The point to emphasize, however, is that the Princeton Theorists took their Turns nearly contemporaneously with the linguistic or postmodern turns. The Princeton Theorists were, indeed, practitioners. While we shall discover Elaine Barkin and Fred Everett Maus (Ph.D., Princeton, 1990) using the language of a "turn" to refer to this event, my intervention is the historicization of the turn with a capital T. To this end, I will allow a certain slippage in the use of "Turn," as between a noun, verb, or hypostasized discourse as if a person with agency. Indeed, I treat "Princeton Theory" as a being. To a degree this reifies a lived practice, but I believe that discourse partially stands outside its putative creators, and even if it does not, as Barkin has said in reference to *Perspectives of New Music* volume 17/2, the participants reified it themselves: "And then, 1979, *whammo*, *trrrrrrrrrrrr*, the RED issue, Revolution Reified" (Barkin 2012, 25).

[3] We shall return to a Heideggerian reading. On Heidegger's *Kehre*, see Heidegger ([1946] 1998), and ([1969] 1972), and Richardson (2003, xxxiii–vi).

1. Princeton Theory's High-Modernism

The best definition of Princeton Theory in its high-modernist phase—prior to the Turn—of which I am aware, under the rubric of "modern formalized theory," takes place in Blasius (1996, 112). Princeton Theory is, "compositional (in that it is not tied to a fixed and transcendental composer or canon). It is discursively autonomous (in that its argument stands outside of history or psychology). It is consistent (in that it is epistemologically self-aware) and it is transparent (in that the statements it makes about music need in some way to be verifiable)." The first seems a denial of the canonic closure found in Schenker's writings; the second characteristic presents a difference from Schenker's project, insofar as that project served as a *replacement* for history or psychology. The latter two tenets appear to derive from logical positivism or empiricism. To restate the third tenet, these composers/theorists would present "epistemologically secure musical discourse[s]" (Blasius 1997, xii), again, an appeal to scientific philosophy in the form of logical positivism.[4]

As an example of the kind of discourse practiced by the composers/theorists before the Turn, in order to describe part of the music-historical importance of this phase of Princeton Theory, and hence to situate and dramatize the Turn away, let us a read a formal definition followed by its

[4] I am reminded here of comments by Alexander Rehding (2003, 42) regarding how music theory could be used in the nineteenth century: "Theory played an important role in the agenda of the *Neue Zeitschrift für Musik*, one that was inextricably bound up with its own notion of progress…. The modernity of nineteenth-century music is inextricably bound up with its increasing reflexivity. And this reflexivity could be supplied by music theory."

interpretations, from Boretz's summa, *Meta-Variations: Studies in the Foundations of Musical Thought*:

> Df. 3.1: $\perp(t) =_{df} (\ :\ Q)\ (\exists i \exists j\ ((i, j) \in Q \supset Ts(i, j) \wedge t = j - i))$.
>
> ("The timespan interval t is the Q such that there exists an i and there exists a j such that if (i, j) is a member of Q then (i, j) is a timespan and t is (j – i).") ([1969] 1995, 165)

Boretz's (Ibid., 126) further interpretation: "A time-span interval is the value assigned to a given time-span on the basis of the times of its earliest and latest moments." In other words, "A time-span is quantized as the *difference between* the integer assigned to its earliest and that assigned to its latest component moment" (Ibid., 164, emphasis original). One of the contexts of Boretz's construction is Babbitt's ([1962] 2003) serialization of rhythm: of the differences between serializing durations by analogy with pitches or serializing durations by analogy with intervals between pitches (Dubiel 2002, 99). This transition from duration sets to time-point sets, respectively, was a conversation of real moment in the 1960's, and served to improve upon, as it were, Babbitt's own earlier efforts and the those of Princeton Theory's European counterparts in serializing dimensions other than pitch, thus Boretz's discussion is important for formalizing the difference in a more complete and compelling manner than available previously. Further, in the context of Boretz's broader discussion, he locates the places where serial and tonal music share characteristics, and where they diverge, showing their identity at an earlier ("deeper") level than thought

previously: that of time or ordered succession.[5] This, in turn, helps locate the importance of his celebrated *Tristan* Prelude analysis, well-known in music theory circles ([1969] 1995, 253–313). Metahistorically, this means that we interpret serial music as having arisen out of tonal music, not slicing off and appearing *ex nihilo* nor, even, as a response to Schoenberg's "atonal" music.

Whatever one thinks of the merits of this formalist history, one way—I would argue a crucial way—of characterizing Boretz's overall goal in *Meta-Variations* is on the model of Rudolf Carnap's ([1928] 2003) *Aufbau*: to reconstruct the (possible) musical world as he then understood it, for himself, on the basis of musical experience. The available term for this project is foundationalism, and let us recall that *Meta-Variations*' subtitle is "Studies in the Foundations of Musical Thought."[6] We are each of us responsible for reconstructing our own (musical) worlds,[7] hence Boretz's radical relativism (Boretz [1969] 1995, 111).

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[5] See Boretz ([1969] 1995, 125–27, 168, 177–95, 220–24 and 240–41).

[6] We shall discuss foundationalism in more detail in Chapter Three, but, quickly, "The main problem [of the *Aufbau*] concerns the possibility of the rational reconstruction of the concepts of all fields of knowledge on the basis of concepts that refer to the immediately given" (Carnap [1928] 1967, v). For Boretz's account, see Boretz ([1969] 1995, 88); for historical context of the *Aufbau*, see Galison (1990) and (1996), Richardson (1998, 1–30), and Friedman (1999, 89–162).

[7] The language of a musical "world" appears in a number of places in Princeton Theory both pre- and post-Turn, especially in the later writings of Boretz, and would appear to respond to Carnap's *Der Logische Aufbau der Welt* (in which Carnap does not define what he means by *Welt*) and Goodman ([1968] 1976 and 1978). We might identify a musical world as a species of *the* world only *after* the Turn. Before that, a musical world was perhaps a music-theoretical system, a formalist "world": a set of musical entities and their interrelations, with rules for change. Later, however, a musical world would seem to include musical behavior, dress, and a broader conception of sociality, perhaps as discussed by Maus ([1988] 1994). We shall return to the Maus article. As to clothing, Randall writes eloquently in his eulogy to Stravinsky: "Scuffed summer-colored shoes not quite tennis-shoes, collar open, gray summer-weight suit uniformly,

Once accomplished, however, once each of us has created the (our) musical world(s), a crucial question arises: where to from here? Do we then simply inhabit it, move its furniture around from time to time? One answer, the one seemingly taken, was to Turn, to question every answer previously supplied: in Boretz's later words, "permanent revolution is the only imaginable intellectual policy for a magazine like *Perspectives* [*of New Music*]" (Berger and Boretz [1987] 2003, 254).

Although there are others available, I have been using the phrase "high-modernism" to mark this phase in Princeton Theory's development. In Georgina Born's (1995, 40–2) groundbreaking work, *modernism* occasions a definition along six more or less expected lines of thought: it is, "a reaction by artists against the prior aesthetic and philosophical forms of romanticism and classicism…. [it shows] a concern and fascination with new media, technology, and science…. A third feature of modernism, implicit in those above, is theoreticism…. A fourth defining element of modernism concerns its politics and political rhetoric, its vanguard and interventionist aims." This fourth notion shades modernism into the avant-garde. "A fifth characteristic of modernism, indicating both the differentiation and the complexity of the discourse, is its oscillation between rationalism and irrationalism, objectivism and subjectivism…. Finally, a sixth feature of modernism… is its ambivalent relations with popular culture" (Ibid., 44).

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quintessentially wrinkled" (Randall 1971, 134). Indeed, as Boretz ([1973–1974] 2003, 360, emphasis original) says, "A musical work, while it may be thus taken to filter the world, and to be in the world as such a world-filtering thing, may also be considered as a world-*like* thing in itself." Wright (2005, 113–19) discusses musical worlds in the context of musical "systems."

High-modernism would present a post-War intensification of these trends, which Born suggests produces a "generalization" of serialism into the total or integral serialism discussed above in relation to temporality.[8] Born then, amusingly, refers to this as "the '50s generation," and, as to be expected, locates its centers and organs as East Coast universities such as Princeton and *Perspectives of New Music* in the U.S.A., and IRCAM and *Die Reihe* in Europe (Ibid., 51 and 53). The 1950's generation, then, presented an "intensified rationalism, determinism, scientism, and theoreticism" (Ibid., 55). While that list includes many undefined "-isms," I think Born is largely correct, although I also think she misses some of the remarkable insights, intensity of thought, musicality and interdisciplinarity *avant la lettre* of these post-War theorists.

In 1962 Morton Feldman, whom we can take as representative of what came to be known as the New York School of experimental composers, recounted his first meeting with John Cage, but framed it in reference to a previous encounter with Babbitt: "Just a week before, after showing a composition of mine to Milton Babbitt and answering his questions as intelligently as I could he said to me, 'Morton, I don't understand a word you're saying'" (Feldman 1962, n.p.). We are obviously to take Babbitt's statement as dismissive, but, also, that if language about music is not directly referential to a conceptual meaning that coalesces as meaning, then it is meaningless, and cannot give rise to understanding, knowledge. A few years after, in 1966, Feldman gave a lecture later published in *Source: Music of the Avant-Garde*, which criticized

[8] (Ibid., 50–1). I refer to Born again because she presents a critique of high modernism from nearly twenty (!) years ago, thus allowing us to historicize her position. Indeed, Heile (2004, 167–69) does so, but passes over her move to consider high-modernism, solely discussing her theorization of modernism.

"academic" composition along the familiar lines, but lines that accord with Born's understanding of high-modernism: "In a certain sense it is a criticism of Webern and Schoenberg. To take another man's idea, to develop it, expand it, to impose on its logic a super-logic; this does imply an element of criticism. Perhaps the music can be described as *academic avant-garde*, a term already in some usage." More to our point: "Have you ever looked into the eyes of a survivor from the composition department of Princeton or Yale? He is on his way to tenure, but he's a drop-out in art." And further:

> The other night I received a telegram summoning me to Princeton. I was expecting this. Once again I made the monotonous trip over the Jersey flats, once again was charmed by the utterly lovely stretch from Princeton Junction to campus. My old colleagues were all assembled, waiting to hear what I had to say. I was perfectly prepared…. "The earth has become small, and on it hops the last man, who makes everything small. He has something of which he is proud. What is that something of which he is proud? He calls it education." Thus spake Nietzsche. (Feldman [1966] 2011, 273–75, emphasis original; Nietzsche [1883] 1954, 128 and 129, slightly modified by Feldman)

This still upsets, as it should. Feldman makes of academic musicianship a *moral* issue: what kind of life are we to live? And implies we have each of us been living a life of ideology, in vain.

2. *Princeton Theory's Experimental Turn*

Modernism, the avant-garde, and especially high-modernism, then, could not seem further from, indeed occurs dialectically tense in relation to, the musical experimentalism that was theorized at least by Cage ([1961a] 1966 and [1961b]

1966). Experimentalism has recently gained legitimacy as a topic of academic discourse,[9] but any number of cultural conditions have created this change, and certainly around the time of Princeton Theory's experimental Turn, it is impossible to imagine the performance of discursive experimentalism would have been welcome in the academy, tenurable.[10] Although many studies of experimentalism exist, most problematize its definition as a condition of their inquiries.[11] Because of this, I would like to list the symbols for high-modernism and experimentalism, respectively, as they occur in Born (1995, 63), a list which Born presents straightforwardly: if high-modernism features determinism, rationalism, scientism, universalism, is cerebral, complex, text-centered and teleological, and is based in East Coast universities and is state-supported; then experimental music features indeterminism, irrationalism, mysticism, sociopoliticization, is physical, performative and simple, is practice-centered and cyclical, repetitive, or static, and is based on the West Coast, and in art colleges.[12]

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[9] As long as the discourse itself is not performative *of* experimentalism—an utterly prosaic surface of disinterested mastery must still reign. This said, I am all-too-aware that merely to speak of experimentalism is to be perceived to take part in it, and to be treated accordingly—specifically to have one's discourse always treated as never academic enough, far beyond the expectations for discourses which do not speak of performative discourses.

[10] Randall was awarded tenure at Princeton on July 1, 1967, before writing *Compose Yourself*; Barkin, tenure at UCLA in 1974; and Boretz, tenure at Bard in 1976, during what we might call their transitions to frankly experimental writing. (personal communications)

[11] See, for example, Nyman ([1974] 1999), Benitez 1978, Lewis 1996, Mauceri 1997, Nicholls 1998, Broyles 2004, Cox and Warner 2004, Beal (2006, 3) and Goehr (2008, 108–35).

[12] As Boretz has said, "One [problem] that's still bouncing off the walls of the modern music business is the relevant and irrelevant sense in which we [*Perspectives of New Music*] were regarded as partyline Princeton—specifically, as

To this we should add that modernism was symbolized historically as taking place in uptown Manhattan (within the rationalized, imposed grid street plan, but not North of 125th Street on the West Side—indeed, not even the North side of that street—or North of 90th Street on the East Side), whereas downtown music identified itself as experimental (within the confusion of one-way streets occurring South of Houston Street).[13]

I would like to address J. K. Randall's own sense of a Turn by quoting him from a recent unpublished interview:

> Scott Burnham asked me whether I ever had the experience of sort of kicking the habit and going to something else. Just, deciding I don't want to do that any more. And I told him, "no," I said, "my life has been pretty" [indecipherable, but gesturing a straight line with hands]. And then, you know, I thought about it and I realized, well, wait a minute, at that conference in San Francisco [the Fall Joint Computer Conference, November 7–10, 1966, of the American Federation of Information Processing Societies] I remember skipping a couple of sessions and just walking around looking at San Francisco, and thinking about the point, "what the hell am I doing up here with these people?" And so, I can remember very specifically the next conference for electronic what not was being arranged with a composer and a guy interested in [the] computer who had designed the computer to produce twelve-tone phenomena named Gus Ciamaga [1930–2011], a very nice fellow, a Canadian. I described to him something or other that could be involved in the next get together and then I said to him, "and it's all yours." I said, "you know, forget me." And he was a little bit hurt and offended I think, but that was it. That was the end of that. (2011, disc 2, c. 36:00)

We should pause for a moment to absorb Randall's admission that at least the premonition of his Turn, his growing awareness of something changing within

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Milton Babbitt's spokesthing, and as antimagazine to the other mainline avant-garde: John Cage, Morton Feldman, Earle Brown, Harry Partch, West Coasters, *Source*" (Berger and Boretz [1987] 2003, 252).

[13] See, e.g., Gann 2006; Berger (2002, 100) attributes the mapping to music critic John Rockwell's writings in *The New York Times* before he was the Sunday arts editor; see Rockwell 1973.

him, took place in 1966, in San Francisco. I have to wonder how far the conference was from Haight-Ashbury. The mythological aspects of Randall's moment are almost too good to be true, too perfect—Randall, a pioneer in the computer generation of electronic sound, leaving the computer conference, wandering the streets, smoking a cigar, the Fall before the Summer of Love. The piece Randall read at that conference was the third of his "Three Lectures to Scientists," published as Randall ([1966] 2003), which reads as a kind of proto-Spectralist talk. Given that Randall locates his turn away from computer music in 1966 and that he did not begin *Compose Yourself* until later (1970), we can begin to wonder if his discourse between those two dates showed the effects of his sense of kicking the habit. Earlier, in 1964, Randall published a "review" of *Convertible Counterpoint in the Strict Style* by Serge Taneiev in *The Journal of Music Theory* (Randall [1964] 2003). The "review" consists entirely of quotations from the text and other, Russian, sources. Brilliant for its condescension and the manner in which it creates a kind of culture around Taneiev's text, Randall's is clearly an experimental text, and it is hard to believe the editors of *The Journal of Music Theory* published such an experiment, but they did.

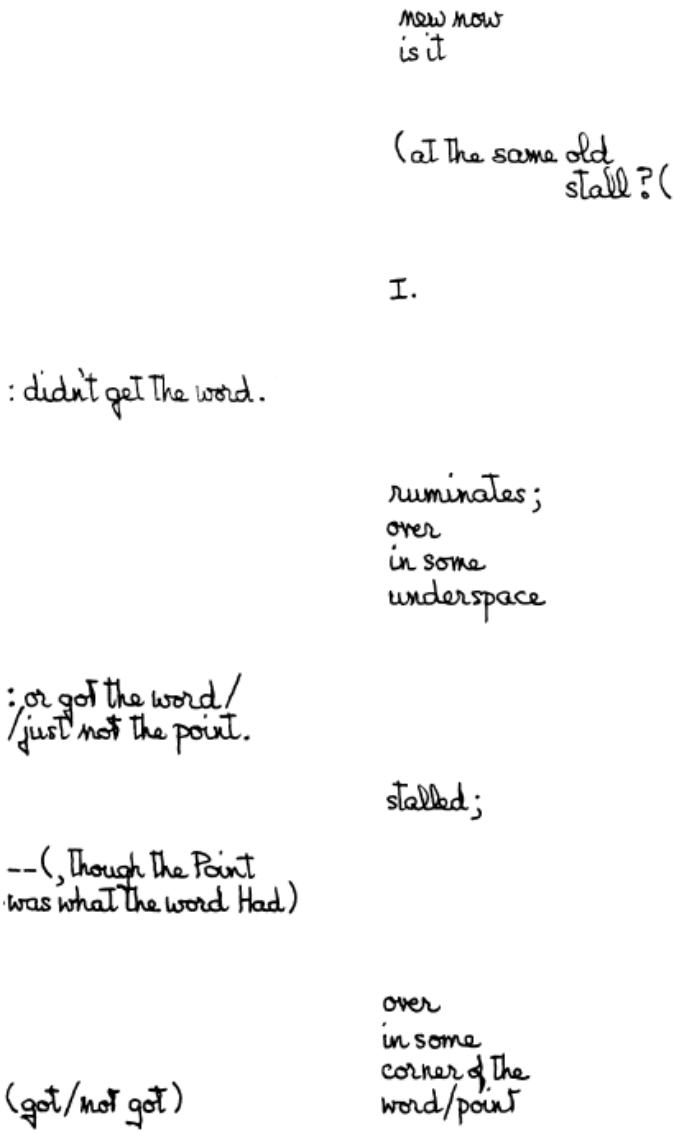
Indeed, in prefacing Randall's article on "Electronic Music and Musical Tradition," which *Music Educators Journal* published in 1968, then editor, Charles B. Fowler, stated that, "the reader faces this one article as he would face the most inscrutable piece of electronic music. He may comprehend on many levels by analyzing its intricate arguments, by absorbing the illusion [sic] of its rhetoric, or, perhaps most profitable, by letting it launch his mind into new consciousness." (Randall [1968] 2003, 207) This sounds utterly of its time, trippy, mimetic and not at all high-modernist—I find it hard to believe that an academic publication

printed it, and absorbed the language of the youth culture of the 1960's. Together with the Taneiev review and Randall's epiphany in San Francisco, it implies a kind of transitional phase for *Compose Yourself* and the Turn, a process of coming to be, which, of course, the beginning of the *Compose Yourself* text itself dramatizes.

As an example of the kind of discourse which appears in Princeton Theory after the Turn, let us read closely a section of Randall's "How Music Goes," ([1977] 2003, n.p.) reproduced as Figure 2.1. During this passage, Randall unfolds a metatext in the space of Tchaikovsky's "Candide" dance (!) from *Sleeping Beauty*. The first thing to note is Randall's choice of repertoire: a high-modernist, system-builder analyzing Tchaikovsky, in 1977?[14] Globally—out of time—the next thing I notice about Tchaikovsky and Randall's pieces is that time elapses over roughly the same span: roughly 1:30. That is, it takes roughly 1:30 to listen to Tchaikovsky's score; likewise for Randall's score (and the latter is as much a score to be—internally—performed as the former). This mapping of piece-times strikes me as important for it heightens the sense of Randall's mimetic faculty (to which we shall return).

[14] Indeed, autobiographically, we might say that Randall here reverts in some sense to his childhood by studying Tchaikovsky, for that is when one of his teachers told him to study Stravinsky and Tchaikovsky, which, "goes back to orchestration; hearing each individual instrument as a whole with its own tessitura low to high" (Randall 2011, disc 2, c. 18:00).

Figure 2.1: First Page of Randall ([1977] 2003, n.p.)



Although taking place during one pass, one listen, "new now, is it" announces an intervention, specifies its temporal placement but only as an after effect, and

subsequently questions both the novelty of the preceding moment and its temporal placement: memory alive in the present, but of a past now no longer available. "Ruminates" as this music does, as we are coaxed to do when analyzing this analysis: returns feature prominently in this music, directionless, the sense of Beethovenian goal-directedness, later in time, shattered beforehand. A pastoral scene, we spatialize time: we are in a place as much as during a time, thus alleviating our need to track closely the piece's time.[15] All of this is very far removed, indeed, from the type of discourse Babbitt imagined in his famous methodological articles on music theory, or from Boretz's *Meta-Variations*, as discussed earlier. (See, for example, Babbitt [1961] 2003 and [1972] 2003.)

I am not the first to notice that something happened to or with Princeton Theory, of course. Joseph Kerman, in his influential critique of music theory and musical discourse as he then surveyed it, signaled a kind of institutional backlash by historicizing the Turn as a return, comparable to Kretzschmar and Tovey, one that scandalized musical discourse in its high-modernist moment:

> Under Boretz's continuing editorship [*Perspectives of New Music*, post-1971] became in everything save bulk a typical avant-garde little magazine replete with amateur graphics, wildly fluctuating typefaces, spectacular personal effusions and—a fascinating new feature—poems in *vers libre*, generally printed a dozen lines or so per page, commenting on a few bars of some composition. It was a full swing of the pendulum. Keller's Wordless Functional Analysis and Schenker's near-wordless *Urlinie-Tafeln* had given way to an impressionistic criticism which would have left Kretzschmar and Tovey themselves, with all their purple rhetoric, speechless. (1985, 104)

[15] See also Randall (1967, 144–46), which evokes a pastoral scene to describe the "stuff" of musical analysis. By way of contrast, see Randall ([1974] 2003), which repeatedly returns, thickening its temporality via multiple repetitions of various figures or motives, as it progresses forward.

Obviously, Kerman is here dismissing Princeton Theory's little magazine, featuring impressionistic criticism in the form of personal effusions over a few bars of some random—it matters not—composition. The condescension drips off the page. The attack on Boretz, personal. Kerman locates his sense of the limits of acceptable personal utterance in relation to music. Music criticism is to be historical, not personal.

What, under Kerman's reading, caused such a dramatic Turn? Kerman tells us that, "by 1971, when Stravinsky died at the age of eighty-nine, it was clear there was no credible successor. Something died at the center of the ideology of organicism. So in a deep sense, perhaps, *Perspectives* [*of New Music*] and all it stood for could not survive much longer" (1985, 104). Citing Solie (1980), it is unclear how for Kerman a high-modernist publication—one which slices the undergrowth without mercy—could be conceived in organicist terms, but Solie's article was influential. At least circumstantially, Kerman has a point, as *Perspectives of New Music*'s cover emblem to this day reproduces Stravinsky's representation of his serial music; issue 9/2 (1971) presents a one-hundred-eighty page "composers' memorial" to Stravinsky; and Babbitt, at least, courted the Stravinskian legacy after Stravinsky's own turn to serial composition. (In *The Collected Essays of Milton Babbitt* (2003) there is only one passing reference to Stravinsky before 1964, at which point the discussions of Stravinsky increase dramatically.) Something Kerman passes over, however, is the fact that Randall, for instance, wrote *Compose Yourself* beginning in 1970, before Stravinsky's death. Babbitt, for one, consistently thematicized generations of composers in his

writings,[16] implying that the future would hold promise—that is what the younger generations do: in addition to mollifying past grievances, they promise to extend the present into the future—and, indeed, if Babbitt was a modernist, a revolutionary, he would have no choice but to concern himself primarily with the past in the present for the sake of the future. Was Babbitt not the fulfillment of Stravinsky's tradition? That is, was not Babbitt the credible successor of which Kerman speaks? Further, a rather robust literature about Stravinsky by Princeton Theorists was indeed included in the journal, before his death.[17] Odd, however, is the notion that Kerman in 1985 would pronounce the death of *Perspectives of New Music* "and all it stood for," when the journal was still at that time publishing research that mainstream music theory considers innovative: similarity relations, new music studies, transformational theory, combinatoriality and the aggregate, etc. (a point which challenges the very notion that we can trace a drastic Turn in the institutional discourse). The year 2012 marked the fiftieth anniversary of continuous publication of the journal, this even after the passing of Babbitt.

In a counter-move to Kerman, Cook and Everist ([1999] 2001, vi) coalesce Princeton Theory's high-modernist and experimental moments before and after the Turn into one moment, as a kind of pivot: Boretz's *Meta-Variations* ([1969] 1995). In describing Princeton Theory, they state that *Meta-Variations* best captures, "the heady atmosphere of that world, which somehow managed to combine hard-edged scientific values with those of late 1960's alternative

[16] See e.g., Babbitt (2003, 34–6, 335–37, 428–30, 472–74).

[17] See e.g., Cone 1962; Berger 1963; and Boretz ([1969] 1995, 332–41).

culture." John Rahn (2012, 35) seems to agree, recently characterizing *Meta-Variations* as using symbolic logic (predicate calculus) to present a "phenomenological reconstruction" of music in the tradition of Carnap and Quine. We discussed earlier the Carnapian filiation of this text, and we shall discuss it in further detail in Chapters Three and Four, but I want to mark here the revisionist history implicit in both Cook and Everist and Rahn's characterizations: until Friedman (1999) and Ryckman (2007) the Husserlian filiation of Carnap's *Aufbau* had been suppressed or lost. Indeed, there is a difference—or at least mid-century there had been perceived to be—between Husserl's phenomenological project and Carnap's phenomenalist reconstruction of the world and the individual's cognition. This distinction survives in Blasius (1997, xii) where he states the following in characterizing Winham's unfinished project: "I have also rather loosely used the work [sic] *phenomenology* in reference to certain explanations. This is not a term Dr. Winham uses, and the locution *phenomenalistic construction* might be more accurate (inasmuch as these explications take as their subject musical phenomena and as their method Carnap's axiomatic constructivism), yet I find the use of phenomenology less awkward. No connection is to be drawn with the analysis of continental phenomenology" (emphasis original).

I honestly find no evidence for Cook and Everist's description in Boretz's text itself. I read *Meta-Variations* as a profoundly high-modernist text. As Boretz ([2001a] 2003, 444) himself later stated, "Typically for academe, the critical lessons of the Sixties were only then [in 1970, one year *after* the completion of *Meta-Variations*] beginning to be reflected in the [Princeton music] department's

social and curricular configurations."[18] I can imagine floating a reading that demonstrates the tensions of experimentalism in the text as a kind of subtext, specifically on the problematic of the transition from the closed to the open work or the problematic of masterwork culture, but to rewrite it as otherwise experimental is to ignore its scientistic orientation, actual socio-historical location, and therefore, to rob it and the Turn of their respective powers. Indeed, part of Ceely's (1972, 258) complaint is the presence in *Perspectives of New Music* of *Meta-Variations* and the absence of any sense of "the Sixties" and the Vietnam War: "[*Perspectives of New Music*] is the only serious journal of the sixties that one may read and have no idea that the Vietnam War existed" (Ibid., 260). Ironically, however, this same issue includes part of Randall's *Compose Yourself*: *the* experimental Princeton text, *the* text responding, in part, to "the Sixties," the Vietnam War, the Manson Murders, etc.[19]

While introducing a reprint of the first "Stimulating Speculation" of Randall's *Compose Yourself*, Cox and Warner (2004, 107) state that, "it presents a careful and articulate phenomenological description that refuses to separate listening (in this case, to Richard Wagner's *Götterdämmerung*) from the totality of bodily and conscious experience." I think this is a pertinent (although incomplete) reading of the significance of Randall's text, implying a figuration of the text as turning from structuralist to phenomenological concerns, which is partially responsible for the stir it caused. But Princeton Theory is not

[18] Indeed, Boretz ([1987] 2003, 267) states that *Meta-Variations* was a reaction against *both* what we have been calling high-modernism and "The 1960's."

[19] In his drafts for *Compose Yourself*, but suppressed from the published version, Randall references August 8, 1969, the first night of the Manson murders. (1970–71, b. 39 f. 4)

monolithic. Writing under a discussion of a "theory of experience," and hence theorizing the Turn as a turn to discussion of experience as opposed to "theory of piece" (standing objectively, outside the subject), Rahn critiques music-phenomenological discourse based on its potential for regression: "A theory of experience may degenerate into the whining, mewling, and puking of a perpetually infantile and unformed analysis so pathetically fragile as to avoid potentially 'disturbing' intercourse with its peers, hiding behind the arrogance of an ad hominem self-justification" ([1979] 2001, 64). I would suggest that Rahn does not take the issue far enough, specifically phenomenological analysis' similarities to psychoanalysis.

Staying with Rahn (1979] 2001) for a moment, on p. 51 he presents, "four sets of paired terms which loosely indicate some general, mutually interpenetrating conceptual areas," areas which he uses to characterize Princeton Theory pre- and post-Turn. Continuing, they are, "(1) analog/digital; (2) in-time/time-out; (3) top-down or concept-driven/bottom-up or data-driven; (4) theory of experience/theory of piece." These are quite useful for meta-theory, and we could draw them out of any number of writings pre- and post-Turn. But I want to mark the point that, at another level, for Rahn these are still modes of explanation. Music theory, in 1979, still explains for Rahn, and so his metatheoretical pairings help explain how music theory does so. The post-Turn writings are still *music theory*. This point takes on greater significance when we consider work by Joseph Dubiel (2000a) which, although "within" Princeton Theory, challenges music theory's explanatory claims. From analysis to description; description could be the marker which Rahn, writing in 1979, was not able to articulate. So we can read Randall, when he asks, "Would you agree

that a noun is just a placeholder for adjectives?" as articulating a difference between explanation—concerning nouns and being as expressed through propositional thinking—and description—concerning adjectives and the potential richness of shaping musical sounds via words.

Indeed, Rahn later points to a Wittgensteinian filiation in Boretz's work, from early to recent, implying a structuralist to a post-structuralist project: "Boretz's later work… bears a relation to *Meta-Variations* similar to the relation of Wittgenstein's [*Philosophical*] *Investigations* to his *Tractatus* [*Logico-Philosophicus*]" ([1989b] 2001, 89). A legitimizing motion, to compare Boretz to Wittgenstein—that most enigmatic of figures—seems overwrought, yet can we recuperate a Wittgensteinian reading of Boretz's texts? There does seem to be a similar dialectic at work over the course of both of their careers: the tight, nearly axiomatic propositions of the *Tractatus*; the axiomatic reconstruction of cognition in the earlier Boretz of *Meta-Variations*. The awe in the face of system-building in the earlier texts of both authors. The influence of the *Tractatus* on Carnap's *Aufbau*; the filiation of the *Aufbau* with both Goodman's *Structure of Appearance*, and Boretz's *Meta-Variations*. More to our point, *Meta-Variations* cites the *Logical Investigations* on the inseparability of description and interpretation.[20] Further, the late Wittgenstein and Boretz both mark the limits of language in relation to (musical) thought. (We shall return to these issues throughout this dissertation,

[20] "Now even the discrimination of a physical concretum may be considered a 'first-level interpretive act,' which distinguishes the *perception* of a 'thing' or an 'event' as an act in which a seen color area, touched surface, or heard sound are 'interpreted' as *effects* of physical objects and events, from the 'zeroth,' 'raw-feel' level of acts of 'pure perception' whose supposed further intervention can nowhere be cognitively isolated, nor even distinguished within the conceptual framework of our language (as much of Wittgenstein's *Philosophical Investigations* is at pains to point out)" (Boretz [1969] 1995, 70, emphasis original).

but especially in Chapters Three and Four.) But, within Princeton Theory, Dubiel seems a later Wittgensteinian theorist: both are concerned to spirit away cumbersome ideas and confusions in our use of language of which we were faintly aware but which impede our ability to think/hear music more fruitfully; the concern to clarify our notions of rule following; the overthrowing of explanation with description. (See, e.g., Dubiel 1990 and 2000a, and Wittgenstein [1953] 2009, §109.)

As for metaphors for the Turn, Paul Fromm, the early principal financier of *Perspectives of New Music*, wrote in its first issue: "We hope that by offering composers the opportunity to discuss issues vital to them, and by encouraging a mutual interchange of ideas between composers, performers, and listeners, *Perspectives of New Music* will succeed in bringing music closer to the center of contemporary culture" (1962, 2). Additionally, Fred Everett Maus (1993, 276 and 278–80) figures the Turn as from the mainstream of music theory to the "margins," occasioning a discussion of the gendered politics of such a distinction, suggesting centers and margins are metaphors for locations of music-political power, leading ultimately to the utopian conclusion that "*music theory should not have a center* (nor, therefore, should it have any margins)" (Ibid., 278, emphasis original).

Maus has twice sought to understand the Turn in print (Maus [1988] 1994 and 1993), the first time from a pragmatic and social perspective, the second, from a gendered perspective. In the earlier article Maus seeks to understand the Turn in terms of value and expression theories of art, from Collingwood to Tolstoy to Dewey (Maus [1988] 1994, 109 and 114). Additionally, the Turn for Maus is toward process rather than product (Ibid., 109–10); the generalization of

art to the quotidian (Ibid., 110–11); the blurring of the distinction between specialists and non-specialists (Ibid., 111); and the placing of importance on personal experience over formal training (Ibid., 111–12). In terms of our concerns, these are many of the markers of the experimental, but to my knowledge that notion has never been used to describe Princeton Theory's Turn.

Interestingly, the later Maus article locates the Turn[21] around 1980, in *Perspectives of New Music* 17/2 (1979): the issue includes, "extended 'literary' texts by Barkin, Boretz, [Arthur] Margolin, [Marjorie] Tichenor, and Randall" (Maus 1993, 269). We recall, too, that Barkin (2012, 25) located the reification of the Turn in the same volume. Maus acknowledges that his understanding of the Turn is conditioned by his own studies at Princeton at that time (Ibid., 268), thus while Kerman locates the Turn in 1971, with the death of Stravinsky, Maus locates it nearly a decade later, with his own experiences at Princeton, and with the onset of gendered understandings and critiques in academia more generally (Ibid., 275). Maus, then, declines to separate history from ethnography, from autobiography. More generally, perhaps both are right: we can grow deep inside and yet be perceived as unchanged. Less poetically, Randall could have made a Turn earlier, around 1970, which took some time to be absorbed by others, until it reached a critical mass around 1979.

Returning to Maus, his point is to demonstrate that music theory can be gendered, but also to show that there was at Princeton at that time a bifurcation between, "mainstream music theory centered on Babbitt and Peter Westergaard; the significant alternative consisted of Randall and Boretz" (Ibid., 268). Maus

[21] A word he uses, without capitalization. Berger (2002, 147) also refers to the new "movement" as a turn.

further demonstrates that the writers of the Turn were gendered feminine (Ibid., 270); he advocates on behalf of the authors of the Turn (Ibid., 276); and advocates on behalf of a feminine politics generally (Ibid., 276–78). Extending Maus' argument, I would argue that we must interpret the Turn as *queer*: as Maus discusses (Ibid., 277), these are mostly men performing women's work, a traditional understanding of what constitutes the queer.[22] Additionally, given that the Turn has occasioned so much discourse, it has obviously posed a problem for understanding, in a word, has been queer. (See Maus 2004, for a queer reading of Babbitt's earlier denaturalization of music theory.)

Let us recall that at nearly the same time as the publication of Randall's *Compose Yourself*, Paul Fromm pulled funding from *Perspectives of New Music*, forcing the journal to reincorporate as a non-profit. Follow the money: the motion from high-modernist, scientist, avant-garde to postmodern, artistic, experimental coincided with a motion turning its back on the traditional (read: European) sources of patronage of the arts. Although no longer funded by the Fromm Music Foundation, *Perspectives of New Music*, as emblematic of Princeton Theory, after the Turn in fact entered the academy *more thoroughly* than it had in its high-modernist phase. The academy is not a traditional European source of patronage. After Fromm pulled funding, *Perspectives of New Music* secured funding via the academy more thoroughly: Princeton University, Bard College, and eventually the University of Washington, Eastman School of Music, and the University of California, San Diego.

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[22] Hibbard (1985, 97) explicitly compares an improvisation recording by Boretz and Randall to sexual intercourse. Boretz ([1994] 2003) queers gender in the space of music. Scherzinger (2002) identifies Boretz's (later) listening strategies with the feminine.

I have just now stated that the Turn was also about turning one's back on European models of patronage, but I would like to argue further that the Turn was a turn away from especially German masterwork culture and toward presenting an uniquely American space. As Elaine Barkin put it (note that she uses the language of having "turned away"):

> To be then: a Composer of Serious New Concert Music, a Composer of an Elitist Establishmentarian stripe whose Artistic and Intellectual fore-everybodies were mostly Western (Teutonic) European, (born or converted-to) Gentile, and Male. (None of which I am or have been.) …In order to rediscover aspects of my inner and outer social and musical selves that had been suffering from neglect, I turned away from Composing as a Primary Way of Life to (try to) reinvent a world within which ambivalences could be comprehended, within which to live. No way not to rupture to rebuild. ([1988] 1997, 122)

Indeed, Barkin figures it as a rupture, we might say an epistemic shift: a rupture with the patriarchal, the Christian, the German, in order that she may rebuild her life in her own image.[23] Randall puts the sentiment a bit more succinctly: "Germanoid bullshit," ([1991] 2003, 333) or, more recently, "overstuffed teutonic pigs" (2006, 31).

I would like to discuss now Taruskin 2005, which argues vehemently and at length against Princeton Theory, but crucially and unlike his predecessor Kerman, only the Princeton Theory of the high-modernist years—largely symbolized by Babbitt. Taruskin papers over Princeton Theory's Turn—the

[23] I am reminded here—completely devoid of drama—of the following thoughts regarding Celan, Adorno, the German language and the Shoah: "The ubiquitous poetological meta-reflection in Celan's work is best understood as a problematization of the possibilities of poetry after Auschwitz. This is obviously a particularly complex question for the literature of the German language, which for Celan was the mother tongue as well as the tongue of those who murdered his mother" (Englund 2008, 19).

experimental, postmodern, or poetic output we have been discussing during this chapter—and this lacuna locates Taruskin's blind spot, his moment of ideology. For were Taruskin to acknowledge the Turn, the force of his critique would be mitigated, much of the content of his critique would have to be altered, and it would lose its universal status. This said, he does present a compelling and fascinating reading of the entire history of Western music from the perspective of oral and literate traditions. Our problem is that he cannot allow Princeton Theory to be a full participant in that history: he assumes the social isolation of which avant-gardists dream. In some sense he is too close. In quoting William Benjamin (1981, 170), who, although himself a Ph.D. graduate from Princeton (1976), criticizes Princeton Theory, and synthesizing many chapters of discussion of the post-War avant-garde, Taruskin states the following:

> The issues at stake go back to the origins of literate (i.e., notated) music. The "real-time" practices Benjamin invokes—improvisation, embellishment, creative play—are the practices, and reflect the values, of "oral" culture. Their eclipse marks the full ascendancy of literacy—an ascendancy a full millennium in the making. And indeed the values Babbitt's compositional practices maximize—extreme (approaching "total") density, fixity, and consistency of texture, maintained over a long temporal (= "structural") span—are precisely the ones associated with the "spatialization" of music that literacy made possible. (2005, 169)

While we should question Babbitt's purported consistency of texture and fixity, we can perhaps grant much of this characterization. Indeed, Babbitt's students—the authors of the Turn—would in this reading no longer associate their work with the mature Babbitt—the Babbitt of maximization—but there can be no question that Randall, Barkin, Boretz, etc. challenged the (their own) literate tradition, which Taruskin is here articulating via Babbitt, and turned precisely to

"the 'real-time' practices Benjamin invokes—improvisation, embellishment, creative play—[which] are the practices, and reflect the values, of 'oral' culture." Taruskin is, unfortunately, caught discussing Princeton Theory's high-modernist moment, long after the practitioners have moved on. This said, he does imply an historicization of a much broader arch than I shall attempt for Princeton Theory within the context of Western music history, extending from the first notated music to now.

In the second issue of *Perspectives of New Music*—before the Turn—poet John Hollander (1963) critically reviewed Cage's *Silence*. Insofar as that review represents pre-Turn Princeton Theory's thoughts on Cage, the engagement with Cage post-Turn would seem to be a defining feature of its experimentalism. But we hear little about Cage in *Perspectives of New Music* after the Turn—nothing, in fact, during the 1970's—and nothing from the authors of the Turn until Boretz ([1992] 2003, 362–64), the year of Cage's death. For our purposes, what is interesting in Boretz's discussion, besides its insightfulness, is its own narration of Cage's work moving from systems to sounds and silence, perhaps reading in Cage's work a kind of turn.

In 1988 Barkin, Boretz, and Randall founded Open Space, a composers' collective, recording company, and publishing house, part of the notion being that, as discussed in Maus ([1988] 1994), experimental discourses demand experimental pedagogy demand experimental publishing demand experimental forms of co-existence, of being-together, community.[24] The inaugural issue of *The*

[24] See Bayar (2005–2006) for a related discussion. Additionally, from 1983 to 1994 Boretz published a periodical called *News of Music*, which we might think of as transitional between *Perspectives of New Music* and *The Open Space Magazine*. I have not seen copies of this periodical.

Open Space Magazine (1999) describes its mission: "For people who need to explore or expand the limits of their expressive worlds, to extend or dissolve the boundaries among their expressive-language practices, to experiment with the forms or subjects of thinking or making or performing in the context of creative phenomena" (Boretz and Roberts 1999, 2). What kind of community? As discussed previously, Maus ([1988] 1994, 110–11) offers an important set of answers (art becomes quotidian; coexistence of specialists and non-specialists; importance of personal experience over formal training), but in addition, the inaugural issue of *The Open Space Magazine* features articles discussing Deleuze and Guattari's *A Thousand Plateaus* ([1980] 1987). The same book is discussed later, in *Perspectives of New Music* volume 46/2 (2008), within which Rahn (2008) discusses the book from a perspective rooted in May 1968, his own experiences, and those of Princeton Theory after the Turn. *A Thousand Plateaus*,

> preaches and instantiates a rigorous devotion to the ideal of multiplicity, nonhierarchy, transformation, and escape from boundaries at every moment. [*A Thousand Plateaus*] is concerned with subverting a mindset orientated around an identity which is unchanging essence, but equally subversive of the patriarchal move towards transcendence. This has political implications…. [*A Thousand Plateaus*] is a brilliant and inspiring book that has been very influential, partly because these philosophers are *practicing on us and on themselves*. (Rahn 2008, 82, emphasis original)

A Turn from hierarchical ascent, escalating systems, identity-thinking, patriarchy, to multiplicity, the rhizome, and persistence. While no doubt referring to a capacious range of possibilities, Guattari was, of course, a psychoanalyst, so when we read of "philosophers… *practicing*," we understand a code for a psychoanalytic practice. Psychoanalytic practice is absolutely central to an understanding of the sociality or model of community practiced by the

Princeton Theorists after the Turn: given the reflexive character of their experimental practices, Boretz, Randall, Rahn, et al. are *practicing on us and on themselves*. The practice is coded—one needs to know how to read for what is unsaid and resaid, for origins and references to ideas, rhetoric (crucially, the use of antonomasia) and to read for reflexive statements. But the practice is real, and ongoing, and—once initiated—there is no escape, no line of flight.

The two entities, Open Space and *Perspectives of New Music*, now coexist, suggesting the older journal retains its theoretical, high-modernist orientation, while *The Open Space Magazine* presents experimental output. While a fair characterization as far as it goes, there exists more crossover than this implies.[25] If the center has always been compositional theory of the abstract yet empirical kind, then *Perspectives of New Music* could accommodate the center and margin, and *The Open Space Magazine* would represent the margin of the margin. The experimental of the avant-garde, we might say. After all, we can understand experimentalism as a kind of avant-garde of the avant-garde.[26] From here we could read the Turn as from the avant-garde of traditional composition to the experimental of non-traditional forms of music making.

And yet, we must in fact theorize *two* Turns in Princeton Theory: the first toward the experimental in discourse (as discussed), the second back toward the compositional. That is, around 1980 Randall and Boretz discontinued creating traditional, score-based composition in favor of group improvisation, expressing itself in literally hundreds of cassette-tape recordings under the title

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[25] For further discussion see Scotto (2004–2005) and (2012, 218).

[26] See Nicholls (1998, 517–34) for discussion of the avant-garde/experimental divide.

INTER/PLAY. Here we can understand a Turn from a Eurological music to an Afrological music.[27] So, while the critical discourse turns to performativity, composition turns to improvisation, with a nearly decade delay between the two. In the early 1990's, however, Randall started composing the *Greek Nickel* pieces (1992) and the *GAP* series (1993–2002), in a Eurological manner again: for performers on scores with standard notation (Snyder 2012, ii and 1). And around 1992, Boretz started composing scores again (personal conversation). A second Turn, yet the critical discourse remains performative. How are we to read this second, unremarked, Turn, which was in fact a Return, on the compositional level? A tertiary periodization, with the Return performing the function of a late style?

Within music theory circles Lewin ([1986] 2006) is a much-discussed presentation of how music theory might instantiate and systematize phenomenology.[28] Although we have read the motion toward phenomenology as a marker of the Turn, to my knowledge Lewin's article has never been read in this way; the filiation between the two has never been made explicit. But I read Lewin ([1986] 2006) as his own "freak out" piece, i.e., his own (response to) Barkin-Randall-Boretz essay(s) or the Turn. Let us remember that Lewin earned his M.F.A. in 1958 at Princeton University under Babbitt, in the same class as Winham and Randall (Blasius 1997, ix), published consistently in *Perspectives of New Music* and was a board member: he could not have missed the Turn, even if he waited over a decade to respond. After presenting a phenomenological

[27] See Lewis 1996, Randall ([1991] 2003), and Barkin ([1992] 1997). Boretz ([1979] 2003, 55–8), for example, is set in colloquial Black English.

[28] See Kane 2011 and Moshaver 2012 for recent and impressive readings.

preface, a general model, his famous Schubert "Morgengruß" analysis and a section on methodology, Lewin presents an extended critique of all that preceded, arguing that theory must be a *deed*, a series of actions, not reflections, that musical discourse should be post-Bloomian in that it creates. Lewin even quotes Genesis, 1:9–11, from the first biblical account of God's creation, as ultimate authority regarding the loop between perception and creation: we are to respond to perceptions by creating, either poems (in a loose sense) for music theory, or worlds, for God ([1986] 2006, 99). Crucially, soon thereafter occurs a discussion of the authors of the Turn (Ibid., 101–102), and a claim that Randall et al. present a "search for poetics" (Ibid., 101). Clearly a defense against Kerman's (1985) critique discussed earlier, Lewin states that, "the issue is not *whether* there shall be poems, but rather what *sorts* of poems there shall be, and by what criteria they are to be valued" ([1986] 2006, 102, emphasis original). Criticism is a species of poetry: an obvious position for *composers* theorizing music. Randall is said to have described *Compose Yourself* (whose first word is, after all, compose) as an, "attempt to apply compositional concepts to words and to extramusical as well as musical issues and behavior" (Berger 2002, 146). This prompts the question: to what extent can we treat the written texts of the Turn as themselves artworks? We must concede that it is precisely the collapse of the meta-/object-language distinction that encourages this problematic: what is the artwork, and what, the criticism of it? How do we evaluate—which historically implies the maintenance of an aesthetic, detached, distance—when these productions involve us in their unfoldings, as a life unfolds? When comparing artworks to lives lived, we are dealing with ethical considerations. (Which we shall discuss in Chapter Five.)

3. Meta-/Object-Languages

Lewin's concern for poetics helps shed light on a discussion of real moment from the 1960's to the 1980's in linguistics, philosophical logic, and in music theory: the distinction between meta- and object-languages (see, e.g., Keiler 1981 and Nattiez [1987] 1990, 133–35 and 150–60). Within a conception of science as explanation, the metalanguage explains without holding anything in common with, the object language—the object(s) being explained—which, indeed, are not any kind of language. This is the position of early Princeton Theory, and indeed Boretz insists on the separation: "A related problem in the use of predicating terms is the frequent equation of their relations in the language (the 'natural language') in which the discourse is taking place with those in the domain about which it is taking place without consideration of the basis, or often even of the need, for specified correlation. This problem arises from a fundamental, and classic, failure to observe the distinction between a metalanguage and an object-language." "In particular, both Cone and Krenek seem to undervalue the object-language/metalanguage distinction in their worry over whether terms introduced with all due definiential care are the 'intuitively right' ones, metalinguistically, for the phenomena defined" ([1969] 1995, 14 and 18). So a traditional music-theoretical discourse, written in verbal language, appears to hold nothing in common with music as heard—none of its sensed senses of motion, of register, completion. However, if we can conceive of a certain crossover between the two, if they are to communicate at all, if, indeed, a Schenkerian sketch or a Functional Analysis can be said to take place within the object language, then it would be impossible for the meta-language *not* to share

some lived qualities with the object language. While Brown and Dempster (1989, 83) write off this possibility, it enables a conception of theory *as* composition, of which Boretz, at least, had been aware explicitly: "The invention of musical systems themselves becomes an act of composition rather than its invariant context" (Boretz [1971] 2003, 320; paraphrased in Kerman 1985, 99). From proto- or precomposition to theory to composition and back again: all are compositional, creative, musical, activities. As William Benjamin says of both what he terms rationalist (Lerdahl and Jackendoff) and empiricist (Narmour) readings of Schenker, "What they fail to give us are analyses which are artistic statements, *in music*, about music, and this is exactly what Schenker does give us" (1981, 160 emphasis original).

Recall Hollander's review of John Cage's *Silence* (1961), which criticizes Cage's blurring of these distinctions:

> Mr. Cage's writings in the last fifteen years have tended more and more to confuse systematically the musical and the meta-musical; they are as carefully arranged with respect to absolute running-time of aural reception, simultaneity of different messages, and frequent tedium as much of his recent music. It is tempting to break down the conventional barrier between musical composition and critical or theoretical writing, and, in this case, refer to the total corpus of his work as Mr. Cage's *productions*. And so again, perhaps his book calls for some kind of production as a critical approach. (Hollander 1963, 137, emphasis original)

A production Hollander does not himself produce. More generally, the Turn would rest on this understanding between a conception of musical discourse as being at a remove—*not* sharing any qualities with the object language—to a situation where to talk of music in any sense—theory in its broad sense—is to partake of musical creation. To collapse the creator/critic distinction is of course

central to the work of post-structuralist criticism generally. Thus an important reading of the Turn is from a conception of musical discourse as holding a sharp distinction between the creative and non-creative discourses, to a conception where there exists crossover. Where, to return to our Figure 2.1, Randall's page implies its own creativity, gave rise to its own critico-creative response. (I make only the most modest of claims for my reading, but the point is that my analysis of Randall's text is more poetic than my surrounding discourse narrating the Turn. This occurred without conscious intent or planning.)

An insightful reading of the meta-/object-language Turn within Princeton Theory is Blasius (1996, 112 and 112–13 n 22). After Boretz ([1978] 2003), Blasius terms the theorists of the Turn the, "'language as a music' theorists." The project, under Blasius' reading, is to present, *contra* Kerman, "a true counter discourse to that of Schenker…. It would also problematize (or even re-problematize) language. In fact, we might speculate it would mirror Schenker's move, that where Schenker would arrive at a representational transparency in using music as a language or symbol system with which to speak of music, it would take the language used to speak of music as itself a music" (1996, 112). Under Blasius' reading the Turn presents a *critique* of Schenker: one of the foundational discourses of Princeton Theory in its high-modernist moment and music theory as a discipline to this day. This critique is dependent upon a move where, in contrast to Schenker's representational technology, which collapses the meta-/object-language distinction by using musical symbols or notation to represent music, the Princeton Theorists of the Turn collapse the same distinction but fold it out on itself, inverting the motion of the collapse, such that language comes to represent music by *becoming* music. Schenker, in this reading, makes *music* a

music, but the "language as a music" theorists make *language* a music. Interestingly, as with Maus ([1988] 1994 and 1993), Blasius later hypothesizes "a 'crisis' in music theory in the late 1970's," about a decade after *Compose Yourself*, coinciding with the beginning of his own studies at Princeton, a crisis whereby the additional epistemological distinction he posits between a theory concerned with meaning and thus context versus a theory concerned with truth and hence the natural sciences "loses its authority." Blasius declines to offer a reason for this loss of authority, but nevertheless suggests two solutions: the first, a retrenchment into the sciences, represented by the founding of the journal *Music Perception* in 1983; the second, what we are calling the experimental Turn (Blasius 1996, 113 n 22). To this we could add the founding of IRCAM in Paris as another retrenchment into the sciences; Lerdahl and Jackendoff (1983); and the founding of *Music Perception* in 1983; but Blasius' argument is a subtle one.

Under-discussed until quite recently has been the influence and tension with another avant-garde or experimental journal/magazine, *Source: Music of the Avant-Garde*, published from 1966–1973.[29] Already in a lecture before a concert of his music, which was published in issue number one, Harry Partch, apparently responding to journalistic criticism, could explain that, "there has been, at least since Aristotle, a certain strong tendency in the west toward explanation—a kind of syndrome. The first and initial step is fairly innocent—to consider a verbal explanation of a certain art as necessary to an understanding of the art. The second step is less innocent. In this second step the explanation of the art becomes a substitute for the art. But the third step is really something. It is a sort

[29] For discussion of *Source* and *Perspectives*, see Berger and Boretz ([1987] 2003, 252); Boretz (2012b, 11); Brooks (2012, 141–42); and François (2012, 158).

of apotheosis, where the explanation actually becomes the art" ([1966] 2011, 35). Apparently we are to take this as a loss for art and music, and we should mark the initially explanatory nature of discourse in relation to art, in Partch's reading. But what is interesting about this thread in the unpacking of the ideation of the experimental Turn in Princeton Theory, is, of course, its literal economy: "nothing can be copyrighted unless it is the 'writing of an author.' To be regarded as a 'writing,' a work must contain at least a certain minimum amount of original, literary, pictorial or musical expression. In all cases, it is only the particular manner in which the author expresses himself in his writings that can be protected by copyright. The ideas, plans, systems or methods that he expresses, or that are embodied in his writings, are not copyrightable" (Healy ([1966] 2011, 23). These statements about the registration of theory (what had been called precompositional material) *as* composition, were written in response to experimental composer Robert Ashley's "in memoriam" series (1963), by the Acting Head, Music Section, of the United States Copyright Office, published also in the first issue of *Source* (1966). Precomposition, according to the US Copyright Office, is not creation—is not copyrightable. So part of the problematic of Princeton Theory's Turn to the experimental has to do with its lack of salability, its sources of funding, for the collapse of the meta-/object-language distinction implies the collapse of aesthetic distance which enabled the U. S. Copyright Office to disregard precomposition or poetic criticism as expressive, as, "a writing."

How did Babbitt himself understand the Turn which his younger colleagues took but which he himself seems never to have taken? (But note that after 1972 Babbitt stopped writing metatheoretical or methodological articles,

and the frequency of analytical articles slowed—around the same year he began teaching at the Juilliard School of Music—Babbitt's own Turn?) Babbitt, we might posit, must have sensed that one could take formalization only so far, before *some* kind of change had to take place. In response to a series of articles in his sixtieth-birthday *Festschrift*, Babbitt responded in part: "In John Dewey's words: 'the test of the capacity of the (aesthetic) system… (is) to grasp the nature of the experience itself.' For, as I read them, all of the analytical articles here, whatever their explicit relation to observationality, are concerned to attempt to do just that [i.e., to grasp the nature of the experience itself], the 'formal' ones no less than Jim Randall's more graphically isomorphic one (Babbitt [1976] 2003, 359 paraphrasing Dewey [1934] 1980, 286). There is much here we may wish to unpack, but important is Babbitt's understanding of Randall's ([1976] 2003) trippy performance of sections of Tchaikovsky's *Sleeping Beauty*, discussed earlier, as a kind of musical analysis, concerned with reporting observations, presented in a manner sharing the visual form of the original score—in a word, mimesis. The notion here is that the Turn presents analyses, concerned with musical experience, yet in a form or metalanguage which shares the form of the (visual) score or object language. The Turn, then, was toward analyses—discursive texts—which are closer to the scores than previously imagined.[30] But Babbitt in fact deemphasizes the radicalness of the Turn by pointing out the philosophical similarity to the traditional analyses presented, and he does not

[30] As Boretz (2004) says, "Katharine Norman has discovered that the most cogent and vivid way to render the sense of unusual original compositions in words is—unusual original compositions in words. Her texts create striking analogues of the expressive worlds of the musics she describes; each verbal episode is as distinct in style, structure and substance as are the musical issues that it addresses."

seem particularly perturbed by the extravagance of the Randall text, or its subject matter. My point here is that there may have been more communality and less of a schism between Babbitt and the authors of the Turn than much of the oral history of the Turn would imply. (We shall return to similarities.)

I have always taken one of the accomplishments of post-Turn Princeton Theory to be a certain virtuosic use of the mimetic faculty. To the question as to why the mimetic faculty or performativity of these later texts would be important, I might argue that a mimetic performativity is precisely one of the defining features or further, achievements of Princeton Theory after the Turn; that while Princeton Theory in its high-modernist phase sought to understand music through theorization, in its postmodern phase, Princeton Theory sought to perform, in another medium, music. According to Randall, in an unpublished interview:

> My writing looks peculiar, you know, like why did I do all this? And I remember that in working to describe music well, and as I think I've said plenty I was a real fanatic for analyzing music but that at the same time feeling that, "gee wait a minute, I haven't yet found a way that's really getting at what this is going on," so that caused me not only to write a little funny but to write sometimes with the conscious idea that, wait a minute, how about writing like music, instead of writing about music. Well there's obvious mileage in that notion that others than me have also pursued with great results and I've pursued that from time to time. (2011, disc 3, c. 44:39)

A precedent is Cage's "Lecture on Nothing" ([1959] 1971, 109–27), which presents itself as a musical score using words as its entities, but there seems a certain unacknowledged tension between Princeton Theory and Cage.[31] Indeed,

[31] For Randall's thoughts on Cage, see Randall (2010–2011).

Boretz calls his text, "Language ,as a Music," where language imitates/is a music (Boretz [1978] 2003), but Boretz ([1992] 2003) is Boretz's only discussion of Cage of which I am aware.

4. Temporalized Being and the Critique of the Metaphysics of Presence

In the language of the early Martin Heidegger (the Heidegger of *Sein und Zeit*, 1927), we could read Princeton Theory's Turn as from the investigation of entities to the investigation of being.[32] In the initial English translation, the translators draw a distinction in which, "ontological [*ontologisch*] inquiry is concerned primarily with *being* [Sein]; ontical [*ontisch*] inquiry is concerned primarily with *entities* and the facts about them" (Heidegger [1927a] 1962, 31 n 3, emphasis original; see also, pp. 28–35). Heidegger discusses the ways in which ontical inquiry regarding entities constitutes the specific sciences, whereas ontological inquiry—philosophy—inquires into, "*the question of the meaning of being [Sein]*…" (Heidegger [1927b] 2010, xxix, emphasis original). Entities (*Seiendes*) *have* being, but are not identified with being. Being, we might say, is the general state or structure of existence, in which entities share: it is that which makes entities be. Ontology is the study of being; ontic, referring to individual existing entities. "Ontological" studies concern being. "Ontical" concerns the specific entities of the sciences: in music theory, the "fundamentals" or "stuff" of music: chords, melodies, rhythms. In the words of Babbitt, in *Meta-Variations*

[32] I am aware of the difficulty of discussing Heidegger in the space of Princeton Theory. See, for broader discussion, Rockmore (1991) and Wolin (1992).

Boretz, "penetrates and transcends thematic, motivic, and comparable facets of individuality to discover and uncover uniquenesses of process, internally analogous modes of progression, and means of cumulative containment which themselves yield the characteristic thematic, rhythmic, timbral, and other aspects of the surface, and which depend only minimally on communal attributes" ([1979] 2003, 375). Although Babbitt here attributes to Boretz the ability to dig deeper than the "stuff" of music—the ontic level—this is not the same as discussing being, the ontological, within a horizon of temporality: "The provisional aim is the interpretation of *time* as the possible horizon for any understanding whatsoever of being" (Heidegger [1927b] 2010, xxix). For that, in other words, Boretz had to Turn.

Princeton Theory, before the Turn, concerns the specific science of music theory and its justification as an object of scientific and scholarly inquiry. After the Turn, Boretz especially inquires into being. Indeed, there is a pronounced thematization of ontology in the Boretzian text after the Turn: Boretz and Randall's collected texts are entitled *Being About Music*, for example. As Boretz says later, "In music, as in everything, the disappearing moment of experience is the firmest reality" ([1985] 2003, 241). In a Heideggerian context, "reality" reads as a stand-in for being, which is always already on the move, in flux. "The meaning of being [Sein] of that being [Seienden] we call Dasein will prove to be *temporality* [*Zeitlichkeit*]" (Heidegger [1927b] 2010, §5, emphasis original). If Dasein is defined as that being for whom being is continuously at issue, *the* problematic (Ibid., ¶79; Schalow and Denker, *s.v.* being-there), then Boretz's constant concern for his, music, and others' ontological status shows just how intensely he has felt this problematic of being, of Dasein. Martin Scherzinger too

temporalizes the problematic: "As it is with Heidegger, we find in Boretz the language of privileged disappearance… and the systematic inflection of being with time" (2005–2006, 83). In the words of Charles Stein, Boretz's "ever-widening resolution to keep the concept of 'what music is' an open question, is an *action* that has a sub-agenda (that is also perhaps a *super*-agenda), it seems to me, to keep the question of being open as well" (2005–2006, 126, emphasis original). It is easy to read these statements into the overarching course of Boretz's career, as Boretz moves from *Meta-Variations*, which we might say conceives of the being of music as a language, to "Language ,as a Music" ([1979] 2003), which conceives language as a music, to "Music, as a Music," ([1999] 2003), which conceives music as its own internal space, remote from language but susceptible to its influence. The being of music in relation to language, then, shifts dramatically over time, remains open, but Boretz still chases after it.[33] Hence the unconcealment of being—a later definition of Dasein—occurs throughout Boretz's texts (Schalow and Denker, *s.v.* being-there).

Let us recall Boretz's (re)construction of temporality from *Meta-Variations* discussed earlier in this chapter. The resemblance to the Aristotelian definition of time in the *Physics* is striking, and, given the general resemblance in *Meta-Variations* of defining music theory as a science to Aristotle's definitions of science in the *Posterior Analytics*, important.[34] More to the point, we find

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[33] Read from the perspective of Adorno's implicit critique of Heidegger, however, Boretz, although discussing the social in a number of pieces from the 1980's especially, seems to lose the social in considering music as solely a music: "Music is ideology insofar as it asserts itself as an ontological being-in-itself, beyond society's tensions" (Adorno [1949] 2006, 100). See also Scherzinger 2002.

[34] Derkert (2007, 235–47) argues an Aristotelian reading of especially Babbitt's 1946 dissertation, from the notions of teleology and unity.

Heidegger's positioning of Aristotle's conception of time at the center of the Western tradition of being recapitulated in Boretz's account. Aristotle: "For time is just this: The number of a motion with respect to the prior and posterior" (1969, 219b). In Stambaugh's translation of Heidegger's translation: "This, namely, is time: that which is counted in the motion encountered in the horizon of the earlier and the later" ([1927b] 2010, §81). This compares quite closely with Boretz's definition of time-span interval given earlier in this chapter. There is a striking correspondence, when read through the Heideggerian text, of Boretz's project of reconstructing the world on the basis of time, with the Aristotelian definition of time at the seat of the Western logocentric tradition of presence. As Heidegger says, "All subsequent discussion of the concept of time *fundamentally* holds itself to the Aristotelian definition…." (Ibid., emphasis original) From this standpoint, Boretz eventually Turns, rethinking time in a number of texts throughout the 1970's (see, Boretz [1971a] 2003, [1973–1974] 2003, and [1977] 2003).

Heidegger famously called for, but did not himself fully carry out, a destruction of the Western tradition of being, from the perspective of its temporality, its historicity, because being, despite what we have been led to believe by the Western philosophical tradition, is always already on the move, never simply static being. This deconstruction was, of course, Jacques Derrida's self-appointed task in three writings from 1967. As Heidegger ([1927b] 2010, §6) put it, "the task of a destruction of the history of ontology" involves, for Derrida, what we might call the assertion of the self-alienation of being at its origin, its beginning always already alienated from itself, never a simple origin. "The formal essence of the signified is *presence*, and the privilege of its proximity to the

logos of *phonè* is the privilege of presence. This is the inevitable response as soon as one asks: 'what is the sign?,' that is to say, when one submits the sign to the question of essence, to the 'ti esti'" (Derrida [1967] 1976, 18). And further, "As distinct from difference, differance thus points out the irreducibility of temporalizing" at the center/absence of presence, of this essence (Derrida [1967] 1973, 130). Martin Scherzinger (2004, 265–68) has read Boretz ([1971a] 2003) as evincing this conception of a rhythmicized differance of pitch in the moment of its being, in music generally, but occasioned by the music (or death) of Stravinsky. We can read Randall's ([1964] 2003) "review" of the Taneiev book, as discussed earlier, as presenting text without presence: all quotations, none of Randall's own words. The systematic effacement of the self, Randall's self blurs into "new consciousness." The impression, especially of the last section of *Compose Yourself*, is of being and presence already split, cutting against itself, destroyed in multivalence. (We shall pursue a Heideggerian reading of Boretz's ethics in Chapter Five.)

5. Tracing Continuities

If a defining feature of the Turn was the questioning of everything that had preceded it, we, for our part, should question our own assumptions. Specifically, and radically, we should ask if the Turn itself ever actually occurred. We have reason to be doubtful, for in Boretz's words, "I suppose I count as an apostate, despite my fervent protests to the contrary: there is no aspect of my work which isn't colored deeply by Milton [Babbitt]'s looming spectre" (Boretz

2012a, 377). Interestingly, Cook (2002, 91–9) historicizes a performative turn in music theory epistemology, beginning with Schoenberg and Schenker, extending to Babbitt and, implicitly, Boretz et al. In this reading, Randall et al. would not present a Turn from but a continuation of Babbitt. Further, Lewin (1986, 102) states that, "in a superficial view… Babbitt is 'scientific' and 'objective,' while the next generation is 'poetic' and 'subjective.' The superficial view is not exactly wrong, but it is very far from adequate to engage the critical issues at hand, issues which it hopelessly trivializes. The writings of Babbitt are as much poems, in the broad interpretation of the post-Bloomian view, as are the writings of Randall." In Maus' ([1988] 1994, 108) reading, "the change has been gradual, an evolution rather than a sharp break." Reading these statements makes the *continuities* seem more pronounced than the differences. Robert Morris (2012, 20), for example, complicates matters in this way: "The work of Benjamin Boretz, Jane Coppock, Joseph Dubiel, Fred Maus, and J. K. Randall takes Babbitt's rhetorical forays in many directions, into texts that are aptly regarded as poetry, sound/text compositions, and/or musical graphics." But, Morris (Ibid.) also says that, "Babbitt's influence is so far-reaching that writings by Benjamin Boretz, John Rahn, and J. K. Randall, for example, have taken the issue of musical discourse in directions far beyond those that Babbitt intended or envisaged," implying both continuity and change.

Indeed, as many have remarked, Babbitt's writings and spoken discourse are *performative*: to understand his seemingly impenetrable written discourse, it helps to have heard him speak in person, which clearly demarcates clauses, asides, and the final thrust of a given utterance. With Babbitt, then, there is a kind of extraordinary discursive performativity, perhaps matching his musical

performativity. Given this, in comparison, the extravagancies of a Randall or Barkin text seem less extravagant. Indeed, the Turn then seems a point of continuity, or an intensification of Babbitt's practice, not a break nor rupture. Princeton Theory seems equally eccentric both before and after the Turn: at no point are its writings transparent. *Meta-Variations* and *Compose Yourself* seem not too far apart: as Randall ([1991] 2003, 337) says, "Boretz's *Meta-Variations* and my *Compose Yourself* [are] two works of screechingly disparate appearance and orientation which powerfully illuminate each other." Boretz tells us that Randall introduced *Compose Yourself* to him by calling it a, "fictionalized version of *Meta-Variations*." (personal communication)

I would like to pursue further the continuities by addressing Randall's youthful music education. As a young person Randall studied piano with Leonard Shure (1910–1995), who was an assistant to Artur Schnabel. Indeed, it is surprising to hear Randall talk in unambiguously *Kunstreligion* terms about music, for the sake of continuity across his discursive extravagancies, across the Turn. As a young person, Shure, "brought this traditional high-cultural German attitude towards this music: perfectly comparable to some religious exercise. I mean, this was the sacred stuff…. This never left me; that's where it's at and that's where I want to be at…. If you're not that way about music it's a little obscure to me what you're doing unless you're just sort of materializing the way I started," as a child, which was a "purely competitive relation" to others in which he "held them in contempt" (Randall 2011, disc 1, c. 38:00). Taken together with Randall's earlier comments about Teutonic culture, we see a pronounced tension in relation to Randall's musical inheritance, but not necessarily an overthrowing.

Whether there occurred an actual Turn or continuation by other means (gradual change is still change; a turn is not a full stop; to continue after Babbitt is to do just that, to continue), I will leave to another time. To continue tracing the continuities would require another chapter. But surely something did happen. Figuring that something, understanding it, has been the problem for forty years, and this writing has been an attempt to situate, to work through the reception of that something, to move us toward a more engaged understanding of the critical issues at hand. This said, it would be ideological to force closure on this problematic or to talk about, while not also practicing, the Turn. I *believe* in writing experimental discourse about experimental discourse. We close this chapter, then, with an experimental reading of sections of Randall's *Compose Yourself—A Manual for the Young*.

Compose Yourself—i.e., "get it together"; don't talk about composition,

Go home. Write. Compose . (Williams [1948] 1992, 84)

Am I young, anymore?

I don't care much for baseball, "get the water hot!"

—of an answer to that question?

*printed poem literally fills out in time and space while reading it.
*"a manual for the young": all things begin, all things end

—how musical?

1—voice exchange lines 5–7: you/ours; I/mine
2—voice exchange lines 7–8: mirroring/mirrors; thought/thought
3—symmetries: 7: internal symmetry
4—octave/12 divisions with axis point

– ˘ / – ˘ – / ˘ – ˘, – a

1 "wrapped in sound"

or: ˘ – / ˘ – ˘ / – ˘ –

or: ˘ – / ˘, – ˘ / – ˘ / –

1—static; beginning without creation? axiom: here, now/space, time
—allusion to logical system building

1—active

1—"now, here" accented, down, pauses; "arose", rises

up
filling-out space from initial point (axiom): here/space
down

1—simple present

2—present

filling-out of time from initial point (axiom): now/time

6—"tongue": body/only physical in a poem of ephemeral

12—answering: present tense (?)

13—*possible world, not this world; if this world, it is dying.

—"death" but no "birth"; subject "arises" not born; the subject is a question: aporia. "Das Gegebene ist subjektlos."

*"death" vs. "starting" qualified with arise/life–subject
—anthropomorphized vs. non-natural
—qualifies a subject

1 beginning
2 wrapped
3 refrain
4 refrain
5 you/arise: beginning microcosm
6 talk/arises/close/wrapped/talk
7 mirroring mirrored/arise/I
8 ?
9 refrain?
10 refrain?
11 framing echo/arise/now & here
12 things distant/arise/framed/answering
13 some world/death: end/macrocosm
14 end/death
15 wrapping/ed
16 refrain
17 refrain

refrain falls/most of the surrounding lines rise/11–14 die/fall

*mirroring

1&11: now & here: octave framing of 6: tritone axis point

6:
*or?
7:

9: center of poem:
up & down/
left & right/
time & space/
beginning & end

present
non-simple location/
revises earlier
statement which
is now retro-
spectively
altered.

now

expansion of first gesture

time
juxtaposition of traditional dichotomy
space

—seeing in time

future
past
*possible not actual

here

space
juxtaposition of traditional dichotomy
time

—hearing in space

elsewhere
not here/possible world
starting from a possible world

—from here, all possible:
if “most nicely”
—mirrors
—echoes
“most fully”
—contains

Me, My, Mine, I:

—self-assertion: there’s a prelude, & towards

the end of it

the curtain went up & then the

moon came out

plötzlich.”

—sounds a standard Babbitt
ending in the face of
self-assertion

plötzlich:

: has abrogated bounce & snap.

1: Focal for both
–([before for a
(& ~b) ∨ before
2: for b (& ~a)]
∧ after for a
(& ~b) ∨ after
for b (& ~a)
1 (with cycles of One lock Midcycle to cycles of the
Other, Focal for one was Focal for the other.)
2 (—: each focaltime referential for Before in one &
for After in the other —)
3 (, —each mergingtime Referring To after in one &
To before in the other)
4 (; —Sense of reference distinct, cycle spanning;)

III. Experience

Theories is formed from experience / never mysterious forces.

—Dead Prez, "Psychology"

There can be no doubt that all our cognition [*Erkenntniß*] begins [*anfange*] with experience [*Erfahrung*]…. But even though all our cognition starts [*anhebt*] with experience, that does not mean that all of it arises [*entspringt*] from experience.

—Immanuel Kant, *Critique of Pure Reason*, Second Edition

Experience as a ground of cognition was from the beginning a contested site, in which issues of passivity and activity, subjective construction and objective imposition, and the competing role of the individual and collective knower, were never laid to rest.

—Martin Jay, *Songs of Experience*

For a form of behavior [*Verhalten*] to be practical I must reflect on [*überlegen*] something or other. If I have the concept of reflection, the concept of practice implicitly postulates that of theory. The two elements are truly separated from each other and inseparable at the same time.

—Theodor W. Adorno, *Towards a New Manifesto*

If the Turn sought to introduce experience and experiential categories into the musical discourses of the Princeton Theorists via phenomenological descriptions, then the problematic of experience in Princeton Theory generally is that it appears in a tense relation with conceptual thought. In its broadest outlines this chapter argues a dialectic in Princeton Theory between empiricism and idealism: between strong appeals to experience as foundation, goal, justification or evidence for theorizing, and motions away—abstractions—from musical experience, using primarily logical axiomatization, twelve-tone theory,

rational reconstructions of cognition and escape from that which may simply be heard. On the more strictly music-theoretical level, we find both strong appeals to experience and a tendency in the opposite direction. Within the logical positivism to which many of our authors appeal, experience is treated with reverential awe, a sense of obviousness, and yet forgetfulness. Unpacking and situating historically the various appeals, the tensions within music theory's relation to musical experience, is the main goal of this chapter. Let me be clear: my goal is to demonstrate that Princeton Theory was both experiential *and* conceptual. This is important primarily because, as I shall show throughout this chapter, this conception of music theory denaturalizes normal music theory—its assumptions, routines, convictions about how it should best function. Further, given that we are discussing new music composers writing music-theoretical discourse, and that new music composition has been accused of some form of "intellectualism" since its inception, this chapter problematizes our assumptions regarding music theory and experience.[1]

Although central to our concerns, it will become clear nearly from the beginning that experience and its close correlates or stand-ins—intuition, observation, practice—do not appear as a consistent concern for the composers/theorists themselves. Through discussion of the writings of Babbitt, Boretz, Winham and Lewin, among others, we will find Princeton Theory *not* situated in a middle ground between experience and abstraction—the situation perhaps describing more directly the practice of Yale Theory (see Girard 2007, 262–338)—rather, we will find an intense motion away from experience, a motion

[1] See, for problematizations in the German modernist tradition, Schoenberg ([1946] 1975), and Adorno ([1949] 2006, 13–16) and ([1955] 2002).

that, I argue, through its very distance enables a renewed engagement with experience itself. Abstraction vivifies experience.

To capture something of Princeton Theory's engagement with experience is to put our typical notions of musical experience under pressure. As studies in music cognition gain further traction—funding—musical experience becomes reified as that which is most generally available and quantizable: the moving of a computer mouse at the same time as hearing contour purports to tell us something about the musical experiences of the listener—*all* listeners—as does, for example, the clicking of a mouse at the same time as a beat. To determine the listening inabilities of a few in relation to, say, form, is purported to tell us the limits of the abilities of all. Music theory as cognition, as science, tends toward generalization across listeners and pieces. Princeton Theory, however, treats experience as individual and yet attempts to keep it available for theory.[2] Cognition, furthermore, presumes it knows what the "stuff" of music is, and who should be the experimenters, although Randall, for example, critiqued this position vehemently in the late 1960's, arguing the experimenters must be composers (Randall [1967] 2003, 144–50). Although Princeton Theory—especially Babbitt and Boretz—made claims for the cognitivity of musical experience, this was never the gross experience that has become reified in music cognition experiments.[3]

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[2] Morris (2007, 99) however, asserts that recent uses of mathematics in music theory has falsified this traditional verity: "The way we explore a given composition's particularity is no longer different in kind from the way we associate and/or group different pieces, genres, and styles."

[3] As Adorno says, which is multiply ironic given our concerns, "The regimented experience prescribed by positivism nullifies experience itself and, in its

Indeed, during Chapter Two we read the Turn as from science to experimentalism, and because some notion of experiment is at the heart of science, we could have conceived of the Turn as a radicalization of the scientific standpoint of the earlier Princeton Theorists. Just what is experimental about experimentalism? If we bracket the social aspects of experimentalism—which was our concern in large measure during the last chapter—then experimentalism seems simply to denote an openness of musical form, a spirit of exploration, and an indeterminacy as to results; in short, an attitude. This conception could be applied equally well to Princeton Theory during its high-modernist moment, however. As Henry Kyburg (1968, 89), in a reading recommended by Babbitt, has said, "A science claimed to be in its final form would not be science, but dogma; the crucial characteristic of science is its sensitivity to experience and experiment, its susceptibility to modification."[4]

As stated, during this chapter I shall be concerned primarily with the notion of experience, but as with every problematic we discuss—indeed in some ways more so—the historical sedimentation of the notion of experience is thick, difficult to excavate. One place to begin digging is where Martin Jay has prepared the ground, in his masterful study, *Songs of Experience*, wherein he moves quickly to determine what experience is *not*. Experience is not

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intention, eliminates the experiencing subject. The correlate of indifference towards the object is abolition of the subject, without whose spontaneous receptivity, however, nothing objective emerges. As a social phenomenon, positivism is geared to the human type that is devoid of experience and continuity, and it encourages the latter—like Babbitt—to see himself as the crown of creation" (Adorno [1967] 1976, 57–58; quoted in Jay 2005, 347).

[4] Mauceri (1997) unpacks some of the further ideologies and limits of the relations between music as experiment in a scientific sense and experimental music, especially as regards technological mediation.

abstraction, reason, dogma, method, theory, speculation, universals, analytic (as opposed to synthetic), ideas, the collective, science, mind, cognition, thought, general or logic. Experience is, instead, raw, unmediated/immediate, it involves trial, proof, experiment (*expérience* is French for experiment; see Goehr 2008, 110) and is practical. Experience comes in either active or passive forms, where experiment and practice represent the active side, whereas pathos or notions of suffering through an experience, to endure, represent the passive side (Jay 2005, 10–11). Jay further distinguishes two types of experience in the German intellectual tradition: *Erlebnis* and *Erfahrung*. *Erlebnis* contains a life (*Leben*), implies a lived experience, a primitive unity before differentiation, the everyday world, the commonplace, immediate, pre-reflective, personal or individual and ineffable; *Erfahrung*, on the other hand, signifies a journey (*Fahrt*), danger (*Gefahr*), the external, sense impressions and judgments about them, a learning process, the integration of discrete moments of experience into a whole, a progressive movement over time, memory, wisdom and the public or collective (Ibid., 11). To temporalize, we make "appeals" to experience in the past, whereas we "hunger" for experience in the future. Lastly, to "have" an experience (as a noun) contrasts with, "to experience" (as a verb), which is something one is now doing or feeling (Ibid., 12).

John Dewey ([1934] 1980, 36–59) considers the "having" of experiences, which will help us unpack this notion further. (I discuss Dewey because, as we recall from the last chapter, Babbitt has too. We shall return to it later in this chapter.) Dewey says that, "we have *an* experience when the material experienced runs its course to fulfillment. Then and then only is it integrated within and demarcated in the general stream of experience from other

experiences" (Ibid., 36–7, emphasis original). The sense of an experience, "is so rounded out that its close is a consummation and not a cessation. Such an experience is a whole and carries with it its own individualizing quality and self-sufficiency. It is *an* experience" (Ibid., 37, emphasis original). This is a very aesthetic, we might say musical, description of experience, as Dewey further speaks of the rhythmic and aesthetic qualities of an experience in general (Ibid., and 39). Thus, insofar as Princeton Theory makes appeals to experience under the sign of science, as a kind of empiricism, we can refine Princeton Theory's empiricism as being a pragmatic empiricism, we might say a composerly empiricism.

Having discussed the pragmatist Dewey, famous for his attention to experience, we should also discuss work by William James on the notion of a stream of experience or thought, for we shall find it contrasts with Dewey's thoughts and is operative in an important precedent to Princeton Theory, Nelson Goodman's *The Structure of Appearance* ([1951] 189–90). As quoted, Dewey suggests a way in which to demarcate *an* experience from "the general stream of experience," this latter being a locution owing to James ([1890] 1981, 219–78). James attempts to overcome the eighteenth-century empiricist emphasis on ideas or sensations as foundation for experience, and replace them with the full range of experiences we access upon introspection, as a "stream." James discusses the five characteristics of thought: it is part of personal consciousness; is always changing; is continuous; deals with objects other than itself; and is interested in some objects rather than others (Ibid.). The continuity of the experience of thought within each personal consciousness means it contains no breaches, cracks, or divisions; that the experience feels as if it belongs to the same self; and

that moments are connected in time (Ibid., 231). "Consciousness, then, does not appear to itself chopped up in bits. Such words as 'chain' or 'train' do not describe it fitly as it presents itself in the first instance. It is nothing jointed; it flows. A 'river' or a 'stream' are the metaphors by which it is most naturally described" (Ibid., 233).

What, then, do we normally mean by musical experience, alone or in conjunction with conceptualization? Joseph N. Straus has come closest to articulating our normal expectations as to the phenomenal presence of musical experience, in the context of listening to some of Babbitt's music, when he says, "It is probably no harder to conceive the transpositional equivalence of two dyads than that of two hexachords, but certainly, under most musical circumstances, it would be easier to hear the equivalence of the dyads in the direct, physical way that most people mean when they talk about hearing something" (1986, 10). We shall return throughout this chapter to the admixture of concepts and perceptions in musical experiences, but we should keep in mind Straus' notion of the physical immediacy in musical hearing—a certain roundedness to the feeling of the sound as it fills out both our hearing and conception of that hearing, perhaps based in performance situations—as it appears to be such a fundamental notion for our musical experiences as listeners, analysts, musical thinkers.

As we can quickly see, such an array of meanings and associations for experience we cannot possibly cover in one chapter, let alone the myriad complexes these notions embody when instantiated in music-theoretical discourse generally. But we can motion toward such coverage by returning to and extending Jay's mapping: if on one side of discourse we find metatheory

representing the most abstract from musical experience, then moving to theory, methodology, to analysis, and finally to description, we approach the musically experienced. In terms of historical analyses, we find on one side of the continuum notions such as style and genre moving to the individual piece and Babbitt's contextuality.[5] If the tonal (or content-determinate) system is the most general then the twelve-tone (or order-determinate) system is the most piece-specific.[6] These poles help us identify types of discursive tracings evident in what follows, which I shall for the most part leave resonant in the spaces beyond the surface of my discourse.

In the discussion which follows I shall first use Princeton Theory's discussions of musical experience as a window into the question, what is music theory for Princeton Theory? Is it primarily concerned with explaining musical phenomena, describing musical phenomena, or, more radically, is music theory not in fact *metatheory*? The next section of this chapter uses the optic of musical experience to discuss moments in the philosophy of science that influenced Princeton Theory's challenge to our usual understanding of the stuff—the fundamentals, rudiments, or materials—of music theory. I next discuss Babbitt on theory, practice, and experience, demonstrating his placing of importance on the intellectual or conceptual aspects of music, over and above the experiential. Lastly, I close this chapter by discussing David Lewin's various uses of the experience/concept dialectic to denaturalize music theory.

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[5] To which we shall return in Chapter Five; see, for example, Babbitt (1987, 67–8 and 167–68) and (2003, 50, 83, 205, 214, 440–41 and 475).

[6] See, Babbitt ([1961b] 2003, 86) and Boretz ([1969] 1995, 177–95 and 220–24).

An important point regarding experience and conceptual thought which I would like to keep in mind in what follows is that, following the rationalism of many positions Babbitt articulates (as we shall discuss) and Boretz's *Meta-Variations*, if musical experience is thought, takes place during mental episodes, then the dialectic between what music theory takes as its data—experiences—and mental phenomena cannot occur solely as a polarity of opposites. While sometimes in what follows the motion toward thought will turn its back on experience, as precisely such a polarity of opposites, that motion is not the sole pattern occurring between experience and thought. Furthermore, while in much of what follows we shall find experience as *evidence* for theory (such as in the verifiability criterion for logical positivism), at other times we shall find that theory influences experience. Such is the nature of Princeton Theory as both an empirical and idealist pursuit. Such is the problematic nature of musical experience for music theory.

1. What Is Music Theory: Explanation, Description, or Metatheory?

By the turn of the millennium, the experiential could provide the terrain for a plenary argument between Allen Forte and Joseph Dubiel, representing their respective discourses; that is, the differences between Yale and Princeton Theory. The precipitating event was Dubiel's radical reversal of the hierarchy between analysis and description, now giving pride of place to description by denying the explanatory pretenses of analysis, showing the infinite regress of analysis *qua* explanation (Dubiel 2000a, ¶14). Read with a concern for experience

in mind, Dubiel's main point would appear in these statements: "The best thing we could do for ourselves in the world is get ourselves recognized as a fountain of sharp, attractive, useful concepts for grasping our experiences of music…. We ought to make our characteristic concern with 'musical structure,' or whatever we call it, recognizable as a source of stimulus for the invention and articulation of such experience-oriented concepts" (Ibid., ¶17). And later: "Our main business as theorists of music will be elaborating, exchanging, and trying out vividly imagined, diversely formulated accounts of what and how we hear" (Dubiel 2000b, ¶11). Although seemingly free of ideology, and pragmatically-orientated because concerned with our disciplinary identity as a whole, these are normative claims: what music theorists should do. And what we should do is concern ourselves with hearing, experience. This is the crux of Forte's perturbation, for Forte says, "I leave aside the questions of how 'what we hear' is determined, as well as how to account for individual variations in that regard, in order to make an observation based upon simple fact: many of the venerable figures in the history of music theory—Boethius, for example—would be disqualified as music theorists were Dubiel's axiomatic criterion of audition to be applied indiscriminately" (Forte 2000b, ¶3.11). It remains unclear, however, why the indiscriminate application of the request for the audibility of analysis was ever at issue. Dubiel never presented this himself as an axiom, which Forte acknowledges, and where Forte reads requirement, demand, a slippery slope, we can read freedom of choice. Stepping further back, the uproar seems less to do with Forte and Dubiel's arguments, and more to do with their respective disciplinary and generational positions: Dubiel, concerned with how we represent ourselves as theorists to the broader academic community, Forte, with

the internal claims we make to one another, for our work; Dubiel, the phenomenologist, Forte, the system-builder; Forte, the founding father of Yale Theory, Dubiel, the chosen son of Princeton Theory.

Read through this optic it seems all-too-obvious that Yale Theory is formalist, an idealist discourse, while Princeton Theory is empirical, aurally-grounded. We cannot help, it seems, but see them as different, divergent. To a great extent I think this is a correct reading, for Forte and Dubiel's positions carry a discursive history, historical precedents, but if we adopt a more circumscribed vision, focus solely on Princeton Theory or solely on Yale Theory, and examine their actual practices, we will discover that Princeton Theory was as ideal as experiential, as abstract as aurally concrete. Complementarily, Yale Theory would appear as aurally real as it was theoretically abstract. Princeton Theory might have represented itself externally as being solely concerned with the aural, it might have been taken to an extreme formulation by Dubiel (under the influence of Randall, I suspect), but throughout its history we will find the experiential to be a tense site of negotiation for Princeton Theory, a place where abstraction and idealism coexist in equal measure with empiricism, the heard. The specific manner of this coexistence, I argue, is dialectical.

While after Princeton Theory's Turn, Yale and normal theory would seem to hold fast to the scientific conception of theory, within Princeton Theory, certainly Dubiel thematizes a Wittgensteinian turn toward description: "It was correct that our considerations must not be scientific ones. The feeling 'that it is possible, contrary to our preconceived ideas, to think this or that'—whatever that may mean—could be of no interest to us. (The pneumatic conception of thinking.) And we may not advance any kind of theory. There must not be

anything hypothetical in our considerations. All *explanation* must disappear, and description alone must take its place" (Wittgenstein [1953] 2009, §109, emphasis original). Although introducing a notion of theory as hypothetical in relation to already existing pieces, Wittgenstein's turn toward description can be made to accord with the phenomenological project as we find in Princeton Theory after the Turn. The aim of phenomenology, after all, is to describe—to write down, away from the self, externalizing marks on a page. "It is a matter of describing, not of explaining or analyzing. Husserl's first directive to phenomenology, in its early stages, to be a 'descriptive psychology,' or to return to the 'things themselves,' is from the start a foreswearing of science. I am not the outcome or the meeting-point of numerous causal agencies which determine my bodily or psychological make-up" (Merleau-Ponty [1945] 1962, ix). According to Husserl, "The so-called descriptive sciences are not substrata of the corresponding 'explanatory' sciences" (Husserl [1913] 1989, 402). The problematic from the perspective of Princeton Theory and music theory generally is, having taken the Turn, how does it conceive itself, or, how does it negotiate the two poles?

In a kind of marker of the Turn, Boretz critiqued the purported audibility of theoretical discourse in relation to the lived qualities of musical experience, using two texts by John Rahn from the late 1970's as his examples, which we can read as a kind of answer to this question: "Alongside this formalist fervor, there is in… [Rahn's texts] a nascent, evolving awareness of the predestined shortfall of any formalized pitch-time theory in reaching its own music-explanatory aspirations, because of its essential indeterminacy with respect to the experiential ontology of perceived music—at minimum in the Wittgensteinian sense in which

the logicized rational reconstruction of cognition actually occupies a cognitive territory incoherent with respect to what it wishes to explicate" (Boretz [2001] 2003, 445). The Turn, then, was from notions of syntax, the general, networks of relations, formalism or structuralism, to meaning, the individual case, the specific, the cultural, or post-structural. Concepts to experiences. Explanation to description.

Thus Dubiel (2000a) and the Turn attempt to reverse the received importance of analysis over description, but if experience was such a central concern for Princeton Theory, we should expect to find description treated with more respect. If description is somehow closer to experience and if the discursive goal for these composers/theorists was to create discourses matching, arising directly out of, or being otherwise inundated with experience, we would expect description of musical texts to be the primary activity—the clarifying, intensifying, or sharing of experiences. If experience was primary, so too would be description. Importantly, however, "mere description" was denigrated as mere starting point,[7] support, or even orthogonal to *explanation*—this latter discursive activity involving teleology, unity, and abstraction, usually on a scientific model, and hence valued. Valued because properly theorized and theorizable, explanation, not description, was the venerated discursive mode. Description held too closely to journalistic criticism, the incorrigible purple prose Babbitt deemed inappropriate for the academy and, following logical positivism,

[7] Babbitt ([1950] 2003, 10): "[Leibowitz's] analysis is merely description…." Babbitt ([1965] 2003, 191): "Whether one prefers to declare that a theory must be, should be, or is a mere symbolic description…." Similarly, in the words of Hempel ([1958] 1965, 173), "Scientific research in its various branches seeks not merely to record particular occurrences in the world of experience."

non-cognitive, not knowable or a product of knowledge. Because of this description was held to be *further* from experience. Explanation was valued as cognitive, knowledge producing. Explanation was valued too as a kind of armor or perhaps even *Bildung* for the modernist composer facing the disorientations and losses of modernity.[8]

I think that the composers/theorists themselves, although working under the image or sign of an empirical science, understood implicitly that science in the space of music encouraged a motion toward the ideal. In terms of *Meta-Variations*, "*Theoretical* explanation asks basic music-epistemological questions (having to do with the notions underlying the use of such terms like 'music,' etc.) whose answers lie in particular orderings of empirical data, both 'perceptual data' and 'conceptual data' (the concepts governing the slicing of perceptual data into 'musical structures') in more or less formally articulated language" (Boretz 1969, 18, emphasis original). This is a fascinating statement, at least because it defines music theory as what we would normally take to be metatheory, collapsing the two. That is to say, "basic music-epistemological questions" are rarely considered music-theoretical questions; rather, they are normally considered metatheoretical questions, a distinction Princeton Theory helped to invent.[9] Here, then, is a definition of music theory as being both more conceptual

[8] Following conventional usage, "modernity" means the base problematic, whereas "modernism" means the superstructural problematic.

[9] To my knowledge the first use of "metatheory" in music-theoretical discourse was as a label for the first section of *Perspectives on Contemporary Music Theory* (1972), in which, interestingly, "Metatheory and Methodology" was contrasted with "Compositional Theory." In fact, Babbitt only uses the locution in the same year (see Babbitt [1972] 2003, 294), and Boretz only in *Meta-Variations*.

and more experiential than we would normally take it to be. These (meta)theoretical questions, Boretz says, are to be answered not solely in the (meta)theoretical domain; rather, they are answered by appeal to empirical data, to musical materials or events, but also to conceptual data, which are not percepts. This quotation concentrates the fundamental motion in Princeton Theory which I have been arguing: a strong motion to the ideal, answered by a complementary motion to the experiential.

But if we attend to the frankly Aristotelian quality of *Meta-Variations*—comparing the *Posterior Analytics*, (71b) which discusses syllogistic demonstration as the path to knowledge in science, with *Meta-Variations* ([1969] 1995, 49–60), which discusses the conditions for scientifically valid knowledge—we can recall Thomas Christensen's gloss on music theory and *theoria* in the Aristotelian tradition: "In its most fundamental sense, music theory is a science of final causes. Strictly speaking, music theory is not concerned with 'formal' or 'efficient' causes (how a piece of music is composed or performed). Instead, theory is to concern itself with basic ontological questions: what is the essential nature of music? What are the fundamental principles that govern its appearances?" (Christensen 2002, 3) This provides a striking correspondence with Boretz's definition of theoretical explanation. Indeed, if we read a little further along the history of music theory, into, "the Middle Ages, Guido of Arezzo could contrast a 'musicus' who understood the philosophical nature of music with the ignorant singer ('cantor') who could only sound the notes" (Ibid.). The cantor, who does without knowing, is comparable to a beast. Having secured music theory's role in the academy, Babbitt is reported to have said there

should not be an advanced degree in performance, because one does not give such degrees to typists.

Alexander Rehding's following remarks about Riemann's distinction and yet interaction of speculative and practical music theory also appear operative in Princeton Theory:

> The complex power relations between the musical repertoire and the music theory can perhaps be best understood with the help of two terms that Riemann used to classify music theory: he habitually differentiated between "speculative" and "practical" aspects. Speculative music theory was concerned with the metaphysics of musical phenomena, with the attempt to find the basis of what is harmonically admissible and what is not, whereas practical music theory sought to formulate rules and to present them as a theoretical system which would be used primarily for purposes of teaching…. On the most basic level, the interaction between speculative and practical music theory can be imagined thus: speculative music theory searches for the epistemological foundations of music, which practical music theory then perpetuates in teaching.[10]

Princeton Theory, then, appears to share in this broader problematic, contorting its contours in its own specific ways, ways we are in the process of tracing.

Speaking of Randall's unpublished and withdrawn system of tonality, a system involving definitions, axioms, theorems and propositions, Blasius argues that, "Little in Randall's sequence of propositions is phenomenological. It is accurate and even interesting to define a triad as a maximal subcollection of non-adjacent members within an ordered interval-7 chain in normal form, which has the property that in three transpositions it exhausts the pitch content of that

[10] Rehding (2003, 65); Albrecht Riethmüller has commented that the notion of "speculative music theory" is doubly redundant, for "music" in the medieval era already included notions of theory and speculation (Christensen 2002, 6 n 17). We might add that Riemann effects a double forgetting—a kind of remembering.

chain-collection. Yet, this definition maps a system rather than a perception" (1997, 27). The requirement that definitions map perceptions may make up part of Randall's rationale for eventually withdrawing the system, and may thus explain in part the Turn in Randall and Boretz's output starting in the early 1970's, but if "perception" is a stand-in for experience, experience remains problematic as foundation for Randall's system. As stated in Chapter One, following Kerman, Randall's definitions could give rise to their own compositional practice. At such a point, it will be precisely the strength of the previous abstraction that will prove beneficial for experience.

Blasius' reading of Randall's formalization puts us in mind of Blasius' own mapping of possible music-theoretical discourses, as quoted and discussed in Chapter One. Blasius (2002, 42–3 and 1996, 107–14) (meta)theorizes two types of music theory: a prescriptive and *a priori* music theory, identified with the work of Babbitt; and a descriptive and *a posteriori* theory, identified with that of Schenker. Princeton Theory as a whole would appear to partake of both approaches; it sits uneasily between conceptual thought and experience; of an approach to the work of theory that speculates given musical structures and relations, and one that generalizes from a given repertoire. As Blasius (2002, 43) says of the *a priori* approach, having given Babbitt's ([1965] 2003, 195) deduction of the unique multiplicity of interval classes within the diatonic collection as an example, "This analysis stands before any particular empirically accessible mechanisms of perception." As with the Randall, this is a motion toward the ideal, toward the purely conceptual, within a discourse Babbitt otherwise would appear to conceive as an empirical and therefore experiential discourse. Blasius further specifies the *a posteriori* theory as exemplified in the mature work of

Heinrich Schenker. Princeton Theory will in many instances attempt to formalize, using axiomatization, the Schenker of *Free Composition*. The emphasis was on formalization, which while of course based, in some undefined manner, on musical intuitions, was most concerned with the conceptual limitations and possibilities of making Schenkerian theory more rigorous. Again, at this point the level of experiential saturation seems low.

2. Philosophy of Science and the "Stuff" of Music Theory

As discussed during the last chapter, an important concept in philosophy of science—implicit in Babbitt's writings and prevalent in *Meta-Variations*—is foundationalism. In the words of Carnap's later introduction to the *Aufbau*: "The main problem concerns the possibility of the rational reconstruction of the concepts of all fields of knowledge on the basis of concepts that refer to the immediately given."[11] I think in large measure the Princeton Theorists

[11] ([1928] 1967, v). Although we can trace the foundationalist project to Descartes (whom we shall discuss in the next chapter), Michael Friedman has argued against this version of the project of logical positivism. "The positivists—so this story goes—were concerned above all to provide a philosophical justification of scientific knowledge from some privileged, Archimedean vantage point situated somehow outside of, above, or beyond the actual (historical) sciences themselves. More specifically, they followed the lead of the logicist reduction of mathematics to logic [most thoroughly, *Principia Mathematica* by Russell and Whitehead]…. The positivists attempted to justify empirical science and place it on a secure foundation by logically constructing the concepts of empirical science on the basis of the (supposedly more certain) immediate data of sense" (1999, 2). (On logicism in the logical positivist tradition, see Carnap [1930] 1959.) Friedman argues, however, that philosophy was dependent on the special sciences, with Einstein's physics the striking example, and that the aim of the *Aufbau* was, "to fashion a scientifically respectable *replacement* for traditional epistemology" (1999, 5, emphasis original).

themselves accepted this view of the project of the *Aufbau*, for example, or Goodman's *Structure of Appearance*—what I shall call the Received View of the positivist project—and absorbed it as their understanding of their own music-theoretical project. Again, Boretz subtitled *Meta-Variations*, "Foundations of Musical Thought," and I think this is telling. As he says, "The *conceptual* reconstruction of systems 'from the ground up' proposed here models itself on the constructions developed for the phenomenal world as a whole in Carnap's *Aufbau* and especially, in its considerably more fully realized and less problematic successor, Nelson Goodman's *The Structure of Appearance*" (Boretz [1969] 1995, 88, emphasis original). Ayer explains: "Carnap, following Mach, James and Russell, after his own fashion, took as his starting-point the series of elements each constituting the whole of a person's current experiences at a given moment, and attempted to show how the entire set of concepts needed to describe the world could be constructed stage by stage, by the application of Russell's logic, on the basis of the single empirical relation of remembered similarity" (1982, 126).

Although, as argued in Chapter Two, music theory for Princeton Theory *is* in large measure axiomatization, the reason for this axiomatization is not solely for the sake of abstraction and therefore explanatory power or systematic consistency (although these were of concern), the central reason, rather, was that it enabled one to construct the musical world on the basis of phenomenalistic axioms: axioms addressing musical experiences. From this basis, using proper transformation rules, one could speculate: create *new* worlds. This is, in one understanding, what composers *do*: they create musical worlds. The Princeton Theorists, we should always keep in mind, were composers, which although of

course in part ideological, was also operative in important ways in their discourses. Let me repeat: axiomatic formalization was undertaken by Princeton Theorists not simply for the purpose of understanding the (musical) world we already have, that which is given, but rather for the purpose of (re)constructing alternative worlds, that which may be created. This is what composers/theorists in the Princeton tradition *do*, and this provides perhaps the best definition of the notion of a composerly theory or discourse.[12]

This said, in the context of discussion of the experiential and conceptual, Michael Friedman's later contribution to this topic can illuminate an aspect of our problem: "As recent scholarship has made abundantly clear, the standard picture of the *Aufbau* as primarily a contribution to radical empiricist or phenomenalist foundationalism is at the very least grossly exaggerated. I now want to argue that it is much better understood in the context of the issues we have just now been discussing—the problem of forging a new kind of relation between abstract mathematical structures and concrete sensory experience in the wake of Einstein's general relativity theory" (2007b, 103–104). The new physics posited entities that could not be immediately perceived by the senses, problematizing empiricism. The goal of logical positivism or empiricism, as Friedman states, was to reconcile these two poles, which is stated explicitly by Russell, in what became known as Russell's External World Problem. Russell

[12] Furthermore, as I shall argue in Chapter Four, for Boretz at least the construction of the external musical world was necessary in order to overcome the solipsistic predicament to which his commitment to the mental character of music seemed, in turn, to commit him. That is, Boretz's commitment to introspection presents the problematic of how to get out of the self and to other minds, thus constructing a phenomenalist world was an attempt to reality test.

introduced a method or notion of *logical construction* in an attempt to overcome this problematic. Physics was early in the century the model for all the sciences. The problematic of physics, however, was that it postulated entities that could not be observed by the senses. Constructional methodology was the attempt to bridge this gap.[13]

> Among the objections to the reality of objects of sense, there is one which is derived from the apparent difference between matter as it appears in physics and things as they appear in sensation. Men of science, for the most part, are willing to condemn immediate data as "merely subjective," while yet maintain the truth of the physics inferred from those data. But such an attitude, though it may be *capable* of justification, obviously stands in need of it; and the only justification possible must be one which exhibits matter as a logical construction from sense-data…. It is therefore necessary to find some way of bridging the gulf between the world of physics and the world of sense, and it is this problem which will occupy us in the present lecture. (Russell [1914a] 1993, 106, emphasis original)

This is the relevant intellectual context—adjusted from Edwardian Britain to Great Depression New York—in which the early Babbitt—the Babbitt of Washington Square College (later, New York University) during the 1930's—found himself.[14] Further, it is the relevant intellectual precedent for Carnap's *Aufbau*, Goodman's *Structure of Appearance*, and therefore Boretz's *Meta-Variations*. The music-theoretical similarities are striking, the turn to logical

[13] This recapitulates in remarkable ways the situation the new chemistry's discovery of the atom presented to philosophers of science (especially Hermann Rudolf Lotze, Riemann's teacher) in the nineteenth century. Rehding (2003, 83–5) gives a *précis*.

[14] Russell's lectures were delivered in Boston at the Lowell Institute. Further, Boretz quotes from them in *Meta-Variations* ([1969] 1995, 35). For Babbitt's discussions of the Great Depression's impact on his musical thinking, wherein he emphasizes the European diaspora of musicians and intellectuals, and the increased public funding of the arts, see Babbitt (2003, 265, 368, 428, 443, 468, and 483–84); see also Brody 1993.

positivism for the early Babbitt, appropriate. Music composition and theory at that time were positing rows and entities which stretched typical ways of hearing and imagining what could be heard in or as music. If Babbitt or his successors could reconstruct the musical world on the basis of sense experience, of the music they could hear or understand, then they could unite speculation in the manner of theoretical physics and experience in the manner of the man-on-the-street's intuitions about space, time, and motion (musical or otherwise).[15] This union would potentially unite audience and composer of new music.

One way to carry this out is to create phenomenalistic systems. Phenomenalism is the philosophical position that constructs the reality of the external world from the individual subject's own sense impressions, observations, phenomena, *erlebs*, qualia, or experiences. This was the central project in the Received View of Carnap's *Aufbau*.[16] As I shall demonstrate in relation to Borez's *Meta-Variations*, Lewin's *Generalized Musical Intervals and*

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[15] Babbitt ([1958] 2003, 51 and 53) evokes physics. Brackett (2003) unpacks the relations between physics and Princeton Theory in a different although compelling manner, eventually arguing that an improvement over using physics as the model for music theory would be biology. It is at this moment, of course, that we locate Brackett's historical horizon. Relatedly, Grant (2001, 22–7) discusses Heisenberg's physics in relation to the Darmstadt School.

[16] There exists some controversy as to whether or not the *Aufbau* even assumes a phenomenalistic basis. Clearly Goodman thinks so, as did the later Carnap himself, and the majority of commentators pre-Friedman (2007, 138), who claims that, "'Phenomenalism' refers to a standard reading of Kantian transcendental idealism in terms of a dualism between phenomena (appearances) and noumena (things in themselves)." Carnap in the *Aufbau* itself states that, "*Construction theory and phenomenalism do not contradict one another at any point*" (Carnap [1928] 2003, 286, emphasis original). Given that Goodman, Ayer, Putnam and others assume the *Aufbau* assumes a phenomenalistic basis, I will assume so for the history to come. I do not think it would have occurred to the Princeton Theorists themselves to question the Received View. See Misak (1995, 211 n 13) for further discussion.

Transformations, Winham's incomplete and unpublished project and John Rahn's (1974) dissertation, Princeton Theory was largely phenomenalistic in orientation. The contrasting position attempts to construct the world as it exists or could exist on the basis of physical objects. This position is called physicalism, and although Carnap turned to it in his work of the 1930's, and the Princeton Theorist Michael Kassler (1967) presented a physicalistic system, we might identify physicalism with certain strands of music theory that take, for example, the overtone series as foundation for theorizing. Despite the fact that Babbitt ([1960] 2003, 70), in the context of electronic music, had proclaimed that "music is, of course, sound," we might argue that to assert physicalism as a music-theoretical basis would be to swap cause and effect. For as Russell says while discussing the traditionally first presentation of phenomenalism—George Berkeley's *Three Dialogues between Hylas and Philonous* ([1713] 1998)—"sound, as heard, cannot be identified with the motions of air that physics regards as its cause" (1945, 654). By the 1950's, the issue for the philosophers between phenomenalism and physicalism was not one of "truth," or some such notion, rather it was merely systematic expediency and which would be advantageous parsimoniously, an appeal to simplicity—indeed, certainly by Goodman ([1951] 1966, 136–42) this point is made explicitly. As Boretz says,

> We choose for our system, first, a *phenomenalistic basis*, on the same non-normative grounds as Goodman ([1951] 1966, 140), but we, additionally, are focusing on "things" whose "reality" is manifestly phenomenal and thus manifestly "non-physical," although they could be *described*, by means of a cumbersome apparatus such as is employed in Kassler (1967), in terms of purely physicalistic predicates. So I take "some perceptible phenomenal individuals" as basic units. ([1969] 1995, 98, emphasis original)

This said, I think for the music theorists more was at stake between constructing systems based on phenomena or physical objects than simple systematic parsimoniousness or some other systematic concern. Because of the history of the naturalization of music theory—appealing to the overtone series, for example—that had been critiqued in Babbitt ([1965] 2003), as late as by figures such as Schenker and Hindemith, and reignited in music cognition studies of the 1980's, the Princeton Theorists had continually to *argue* for phenomenalism as against physicalism in order to ensure the place of experience in music theory.[17]

Part of Princeton Theory's oral history tells us that *Meta-Variations* is a critique of the lack of experience in the preceding writings of Babbitt (See Forrest et al.). *Meta-Variations*' system (Boretz 1995, 98) follows Carnap ([1928] 1967) and Goodman ([1951] 1966) in being phenomenalistic:

> Choice of a phenomenalistic basis is usually argued for on the ground that since the phenomenal by its very nature comprises the entire content of immediate experience, everything that can be known at all must be eventually explicable in terms of phenomena. A phenomenal system is thus held to constitute a kind of epistemological reduction of the predicates it defines; the definitions indicate the testable, empirical, pragmatic significance of these predicates; and definabilty in the system provides a criterion of meaningfulness. To the phenomenalist, what cannot be explained in terms of phenomena is unknowable, and words purporting to refer to it are vacuous. (Goodman [1951] 1966, 136–37)

Phenomenalism attempts to connect theory directly to experience: we have the experience, hook into it through a process of reflection or conceptualization, and

[17] Derkert (2007, 230–31) convincingly demonstrates what we might term a prehistory of music theory's twentieth-century denaturalization in the axiomatization of geometry by Hilbert (from 1899), filtered through Krenek ([1937] 1977, 81–2), and picked up in the work of Babbitt. We shall return to this lineage in the next chapter.

define our terms such that they embody those observed particulars, sense impressions, or in Carnap's language, *Elementarerlebnisse* (*erlebs* or elementary experiences).[18] This solves the problem of cognitivity or meaning by addressing the verifiability criterion (which we shall discuss further in the context of remarks by Babbitt): I can verify that these direct experiences exist as facts by *having* the experiences, or (in later versions of the theory of verification) by *reducing* my theoretical terms to verifiable, direct, observational terms, hence I can create meaning, knowledge.

"Experience" for philosophy of science is not undifferentiated, a mystical experience. It is experience *of*, intended. The experience *of* is the individual subject's own sense impressions, observations, phenomena, *erlebs*, or qualia. The Princeton Theorists conceived of their projects as using these notions to address what we would call the "stuff," "fundamentals," or "materials" of music—Babbitt often speaks of the "musical event" which is inflected by or defined in terms of multiple dimensions, or, in the Darmstadt terminology which has become more widespread in music theory, parameters. Emphatically not Platonic forms, which we access intellectually and contemplate intuitively, the stuff of music theory is experience(s). The Princeton Theorists were explicit about this, and yet problematized it. As one example, Godfrey Winham begins his dissertation—comprising the verbal half of the first Ph.D. in music composition at Princeton, accepted in 1964—with metatheoretical considerations, distinguishing between a musical *system* and *method* of composition, moving swiftly to define and implicitly privilege a system in the usual sense, but,

[18] For discussion of the latter, see especially Carnap ([1928] 2003, 107–11) and Goodman ([1951] 1966, 154–57).

importantly for our interests, leaving open the degree of concretion of the entities it addresses. A musical system, "consists of a well-defined set of operations upon musical configurations. The latter [musical configurations], however, are not necessarily fully specified musical passages, but may be specified only as to certain features" (Winham [1964] 1971, 261). As examples of systems without fully specified musical passages in the empirical sense, excluding certain dimensions, Winham gives the tonal system's exclusion of timbre and dynamics, and Schenker's near-exclusion of rhythm (except for order). Indeed, in these introductory comments Winham is explicitly far more concerned with systematic *relationships* between entities, not so much the entities themselves, and his rationale is, also explicitly, composerly.

> The configurations to which the system's operations are applied need not all be of the same degree of concreteness. Nor is it necessary that the configurations which are resultants of a given system of operations be less than all of the possible configurations of a given degree of concreteness, or even less than all possible configurations specified to any degree…. From the composer's point of view, indeed, the most useful type of system would be one which did not involve any restrictions on ultimate resultants, but which on the other hand would define some fairly different kinds and degrees of relatedness among as many configurations as possible, in particular all those which the particular composer has reason to believe he would be likely to want to use. (Ibid.)

Winham is quick to point out, however, that not simply any relationships are significant, useful for the composer, and thus worth including systematically. Winham implies significance via a negative example: contra-Schoenberg, music-theoretical descriptions of identity of hexachordal pitch content do not specify a significant relationship. Elsewhere in his unpublished material, Winham investigates musical significance (Blasius 1997, 3 and 12–13), but remarkably

open are the kinds of musical relationships and configurations which could be significant (Ibid., 5–6). I want to emphasize the varying degrees of concretion Winham allows because it destabilizes the "stuff" of music theory, and point to the level of conceptuality Princeton Theory would generally allow within its music-theoretical practices.

While discussing Winham's phenomenalistic constructional system, his understanding of musical significance as an autonomous theoretical pursuit, Blasius articulates Winham's ontology of the musical event as a sound event:

> Of course, this notion of a theory of sound demands immediate qualification. Its subject must not be the musical phenomenon as distinguished not only from notations but also from both physical sound and sense-data…. In other words, the subject of analysis could be the tone, a phenomenal event, but could not be the sound wave, a physical event, or, in contrast, some subjective observational report. …The phenomenal event occupies a sort of tangibly psychological but intersubjective middle ground between notational abstraction, physical event, and sense-data. Also, though, Winham specifies that this phenomenological domain exists in a middle ground between logicomathematical and empirical domains (the latter represented musically by psychoacoustics). This makes his definition of the field much more elusive.[19]

Elusive too, then, is music theory's grasp on musical experience for Winham. Music theory concerns not the notation, the physical, nor quite the autopsychological (the individual mind), because the significance of the musical event itself is to be found in none of these domains. Music, let alone music-theoretical discourse, pivots here uneasily between experience and conceptual understanding.

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[19] Blasius (1997, 15 and 17) As quoted in Chapter Two, "No connection is to be drawn with the analysis of continental phenomenology" (Ibid., xii), but see Ryckman (2007), on Carnap and Husserl.

Rahn appears more certain about what he takes to be the "stuff" of music, showing that musical entities—the "fundamentals," "facts," or "materials" of music—had been understood in Princeton Theory to be theorized and theorizable, not simply given: "'Single sounds' are the 'individuals' of a theory; they are those musical entities which are not made up of other musical entities. In general, a theory will treat an entity as individual when nothing is gained for the purposes of the theory by recognizing in the theory the parts out of which the 'individual' might be considered to be comprised" (Rahn 1974, 7). These are the basic units or indivisible atoms (to be redundant) of music theory: single *sounds*. Rahn continues: "An attempt might be made to count as a single phenomenal sound that audible which has (absolutely) no discriminable parts. Such an attempt would rely on a notion of absolute discriminability. But music theory deals with what is not only discriminable but discriminated" (Ibid.). We should mark the difference between the individual or atomic musical sound and its presentations, which include the typical dimensions or parameters of the musical event, as mentioned previously: pitch, duration, timbre, etc.[20] But, importantly, as Rahn says, "By 'sound' is meant, initially, a phenomenal object rather than a physical one" (1974, 1). It is unclear if Babbitt meant phenomenal or physical "sound" when he said that, as quoted earlier, "music is, of course, sound."

What Blasius was striving to articulate regarding Winham's ontology of music (theory), and what Rahn partially articulates here (he is more explicit later, which we shall discuss further in Chapter Four) is the notion of *qualia*, introduced into modern philosophical discourse by Lewis (1929), discussed in

[20] This distinction between a thing and its presentations I am borrowing from Lewis (1929, 59–62) and Goodman ([1951] 1966, 128–30).

Goodman ([1951] 1966), and, to the best of my knowledge, first introduced explicitly into music-theoretical discourse in Boretz's *Meta-Variations*. A quale (Latin, of what kind) is the subjective "feel" of some experience, what that experience is like (where "is like" refers back to itself, that is, not compared to something external).

> In any presentation [of the given element in a single experience of an object], this content is either a specific quale (such as the immediacy of redness or loudness) or something analyzable into a complex of such. The presentation as an event is, of course, unique, but the qualia which make it up are not. They are recognizable from one to another experience. Such specific qualia and repeatable complexes of them are nowadays sometimes designated as "essences." This term, with such a meaning, will here be avoided; the liability to confuse such qualia with universal [Platonic] concepts makes this imperative…. There *are* recognizable qualitative characters of the given, which may be repeated in different experiences, and are thus a sort of universals [*sic*]; I call these "qualia." But although such qualia are universals, in the sense of being recognized from one to another experience, they must be distinguished from the properties of objects…. The quale is directly intuited, given, and is not the subject of any possible error because it is purely subjective. (Lewis 1929, 59–60 and 121, emphasis original)

In Goodman's ([1951] 1966, 189) language, concerned as it is with the foundational status of qualia—i.e., whether they can serve as the atoms or indivisible units of the constructional system:

> If we divide the stream of experience into its smallest concrete parts and then go on to divide these concreta into sense qualia, we arrive at entities suitable as atoms for a realistic system. A visual concretum might be divided, for example, into three constituent parts: a time, a visual-field place, and a color…. In some ways [however] it is psychologically more natural to begin with qualia and construct concrete individuals out of them than to take concrete individuals as indivisible and construe qualities in terms of these. ([1951] 189–90)

The atoms of music theory for at least Boretz are qualia of pitch and time: "The two qualities I use for construction are *pitch qualia* and *time-order qualia*" (Boretz [1969] 1995, 99).

Lacking this background causes Nicholas Cook (1987, 121 and 222–23) to misread Boretz on the role of sounds in music (theory). Cook reads Boretz as denying that music theory concerns sounds at all—any and all sounds—such is Boretz's (and Babbitt's) supposed commitment to formalism and the "logical structure of a piece" (Ibid.). That is to say, Cook implies formalism is unconcerned with sound, experience. I shall shortly quote the Boretz discussion Cook misreads, but I want to cue the reader to the point that there is a difference between the physical, sound-in-the-world, which is of secondary concern for Boretz, and the sound-as-perceived, as *qualia*, which is Boretz's primary concern. This is not an issue, as Cook reads it, of formalism versus psychologism, but rather of phenomenalism versus physicalism, of, indeed, *qualia* and music as experienced and cognized, versus music as necessarily determined by sound's acoustic properties as displacements of air. Boretz quotes Goodman ([1951] 1966, 204), who states that, "'A concretum is a fully concrete entity in that it has among its qualities at least one member of every category within some sense realm. It is a minimal concrete entity in that it contains nothing more than one quale from each such category.'" Boretz continues:

> "Sounds" are the concreta associated with music. But we are here limiting our system to the description of relations among *pitch* and *time-order* qualia… rather than relations among the associated sounds themselves. This is why the members of our relation-classes, which may at first resemble particulars as, for example, "instances of the presentation of a particular pitch," are actually just the qualia themselves without regard to any "sounds" in which they may actually occur. We are thus occupied in

> constructing "music" without "sound," which may seem paradoxical, but is not. For a "musical structure" "exists" in the mind's ear of someone *thinking of* it (while looking at the score, for example), as explicitly and experientially as it exists by virtue of the perception of its concrete embodiment, in a sense quite different from that in which a physical object may be "thought about" or remembered. ([1969] 1995, 100–101, emphasis original)

We are now in a better position to understand Boretz's point(s) here. Music theory constructs not sounds externally existing out there, in the world, but rather sounds as internally, subjectively construed. It concerns not sounds as *physical* objects or things, such as might concern a psycho-acoustician, but sounds as internally, mentally, heard, in the ear, "the mind's ear." Music theory concerns phenomena, not physical objects, and that which shows itself to us is that which we perceive via our senses. The given in experience is constructed. Thus Boretz is exaggerating for effect when he says that, "we are thus occupied in constructing 'music' without 'sound.'" Music theory still concerns "sounds," but sounds as construed by a musical thinker—heard internally. The problem is that Cook reads Boretz's philosophical categories as straightforwardly music-theoretical ones, importing a language ("formalism") which Boretz was not evoking in that moment of his text. (Indeed, we shall consider Lewin's discussion of the cultural inflections of sounds/intuitions later in this chapter.) The upshot for us is that now we have a better grasp on the "nature" of entities with which Princeton Theory concerns itself, entities which are experiential but not naively so.

Meta-Variations reminds us that we have been assuming a divergence between thought and musical experience in much of the preceding discussion, a difference which was precisely Boretz's project in *Meta-Variations* to overturn.

Unfortunately, the section entitled "The Theoretical Character of Musical Entities: Music as Thought: the cognitive status of 'a musical experience'" ([1969] 1995, 26–29) is less direct in its discussion of the cognitive status of musical experience than we might hope, being directly concerned as it is with a critique of emotive language about music and discussing the cognitive status of experience only as a critique of emotive words about music. But if we retrace Boretz's steps we shall discover in what senses music is cognitive for Boretz, and therefore the ways in which a separation between experience and concepts is an historically constructed separation.

Boretz begins this section with the question, "In what respects are musical compositions regarded in [musical discourse] as 'objects of thought?'" (Ibid., 26) The answer is that it varies, but he asserts that prior to this question is a more fundamental statement, which asserts that in music, "we are confronted with an experiential domain that is not only *thought about* but also, apparently, *thought in*" (Ibid., emphasis original). This is because musical objects are objects only because they are observed by "an author and a perceiver" (Ibid.). "The view I propose is that when someone does not regard music as thought he is not regarding it as 'music' either—just in the sense that the relevant evidence for confirmation or disconfirmation of any of his assertions cannot come from observations of musical data or how it is perceived" (Ibid.). "So what ends up happening is not that we encounter cognitive discourse about a more or less 'noncognitive object'… but rather discourse which itself has more or less noncognitive aspects, to the extent that it cannot securely be said to be 'about' anything—and it can in fact only be said to be about something just to the extent that it does treat musical data-arrays and their slices as intersubjectively

cognitive objects" (Ibid., 28). Finally, we have in Boretz's last clause a definition of cognitive discourse about music, and hence the relation between musical experience and thought. Thought about music takes place *in* (we might say *during*) music, but also *in* discourse about music, and the only relevant observations about music come from how it is thought about or perceived. Emotive discourse about music seems to attribute emotions to music, and although this discourse is incorrigible, noncognitive, it attributes this status to *music*. But musical discourse can only be about music to the extent that it considers musical objects to be intersubjective objects of thought. Hence musical experience is *of* or takes place *in* (we might say during the motion of) intersubjectively available musical objects, forms. By defining musical experience away from emotions and emotional discourse, Boretz is in fact trying to increase its intersubjectivity, its availability to be discussed and thought (about).

Throughout this section I have demonstrated that Princeton Theory orientates music theory to the experiential largely through conceiving its project as creating phenomenalistic systems, and that this experiential concern sits uneasily with a motion toward conceptual knowledge. We have investigated the notion of musical fundamentals, materials, or the "stuff" of music theory within the Princeton theoretical tradition, giving a history of the philosophical and music-theoretical conception of *qualia*. We find in Princeton Theory a composerly concern with potential as well as actual experiences. Lastly, the divergence between experience and conceptual thought was considered problematic.

3. Babbitt on Theory, Practice, and Experience

When considering Babbitt's discourses, we should expect someone committed to philosophy of science to have articulated ideas about the relations between concepts and percepts, idealism and empiricism, theory and practice. Although having commented on theory and experience previously in his career, by 1966 Babbitt would publicly find abhorrent the distinction between hearing and theorizing, between theory and practice—music theory is an empirical science, a science directly related to, based on, bound up with, experience:

> I'm disturbed by what Lee [Finney] said about the lack of correlation between intellectualization—I take it that means some sort of theory construction of what we hear—and hearing. Again we're back to this terrible, terrible dichotomy between theory and practice… as if theory is some sort of useless speculation which we indulge in because we don't have a theory of the practice. And this concerns me deeply, Ross. If your students are creating theories that are not based upon any kind of auditory experience, then I don't know what this is as theory…. I would say it's not theory. It's at best a hypothesis which manifestly collapses upon being confronted by auditory evidence…. After all, there are infinitely many things you can say about a piece of music, and the test, eventually, has to be an empirical test. (Westergaard [1966] 1968, 64)

Here Babbitt wants to maintain that there is no distinction between theory and practice, and yet absorbs practice into theory, thus justifying an "intellectual" or learned approach to musical creation and discussion. Interesting, however, is that Babbitt does not allow that theory could be speculation, divorced from musical actualities or materials, floating free of empirical grounding. Use value is a pragmatic concern, and hypotheses that are not confirmed by empirical—auditory—tests are meaningless, chatter. With this last move, Babbitt, at this point in his career, emphasizes the discursive character of music theory and its

potential for meaninglessness, trying to establish some condition for meaningful utterance.

As stated, theory is in large measure formalization, but formalization abstracts from experience. And yet, experience is crucial, given phenomenalistic systems, and what Babbitt said to Ross Lee Finney, in defining theory as against conceptual thought, speculation. Perhaps, then, we can reread Babbitt as leaving the status of music theory more open than we have perhaps been led to believe by the popular appeal to "scientism":

> Whether one prefers to declare that a theory must be, should be, or is a mere symbolic description, or a structured formulation of statements of relations among observed phenomena, or a collection of rules for the representation of observables, or an interpreted model of a formal system, or still none of these, presumably it can be agreed that questions of musical theory construction attend and include all matters of the form, the manner of formulation, and the signification of statements about individual musical compositions, and the subsumption of such statements into a higher-level theory, constructed purely logically from the empirical acts of examination of the individual compositions. ([1965] 2003, 191)

Part of what Babbitt can be read as achieving here is sensitizing us to how restricted or reduced our notions of the ontology of music theory qua science are. In addition to those listed by Babbitt, a science can do any number of things; it can lead to, "*control* of our environment, *explanation* of individual happenings, *prediction* of future events, or *understanding* of a general kind of phenomenon" (Kyburg 1968, 3, emphasis original). "John Dewey takes problem-solving to be the key concept of science…. Among other authors who take the concept of a formal system as central, Rudolf Carnap is the most distinguished" (Ibid., 33). We lose as theorists when we restrict just what a theory *is*.

Returning to the Babbitt quotation, interesting is the opening's openness, listing possibilities, the turn at "presumably it can be agreed," the subsequent description of the process of *abstraction*, which draws theory away from individual pieces, and the final suggestion that a "purely formal" level of theory-construction exists, derived in some sense from a corpus, but governed by its own systematic rules or at least principles. The moment of that change-over, the moment of that flip from experience to concepts, from absorption in musical entities or materials which can be heard or otherwise related directly to some existing music to a level where concern for consistency of derivation and the systematizing moment takes over, must be charged, important. Important because it locates the limit of music theory as an empirical pursuit, and instead indicates its idealism, its quest for the unheard (of).

In response to a series of articles published in a 1976 *Festschrift*, Babbitt provides perhaps his most extensive thoughts on the question of experience *qua* experience. He begins the conclusion of his response by quoting Dewey: "'The test of the capacity of the (aesthetic) system… (is) to grasp the nature of experience itself.' For, as I read them, all of the analytical articles here, whatever their explicit relation to observationality, are concerned to attempt to do just that, the 'formal' ones no less than Jim Randall's more graphically isomorphic one. What other than experience can define not only what values the variables may assume, but what the variables are most valuably taken to be?"[21] Babbitt quotes

[21] Babbitt ([1976] 2003, 359). In the rhetorical question Babbitt is evoking Quine ([1948] 2004, 187): "To be assumed as an entity is, purely and simply, to be reckoned as the value of a variable." And later: "The truth or falsity of a quantified statement ordinarily depends in part on what we reckon into the range of entities appealed to by the phrases 'some entity *x*' and 'each entity *x*'—

(presumably from memory) Dewey's statement. Dewey implies Hegel's concern, for example, for grand, unifying systems, involving identity-thinking, here from the position of the system's lapse in or sheer inability to experience aesthetic experiences:

> The work of art is thus a challenge to the performance of a like act of evocation and organization, through imagination, on the part of one who experiences it…. This fact constitutes the uniqueness of esthetic experience, and this uniqueness is in turn a challenge to thought. It is particularly a challenge to that systematic thought called philosophy. …To esthetic experience, then, the philosopher must go to understand what experience is…. For this reason, while the theory of esthetics put forth by a philosopher is incidentally a test of the capacity of its author to have the experience that is the subject-matter of his analysis, it is also much more than that. It is a test of the capacity of the system he puts forth to grasp the nature of experience itself. (Dewey 1934, 285–286)

Artworks are inimitable, challenging thought. Experiences are non-repeatable, thought—theory—demands repetition (apparently). Here aesthetic experience, although the object of an individual philosopher, or filtered through the individual, is elevated to a profound level: aesthetics challenges the philosophical system's ability to grasp, to comprehend or understand, experience itself, experience more generally or at all. *Incidentally*, it is a test of the philosopher's ability to experience the aesthetic herself. *Personal* aesthetic experience, for Babbitt and Dewey, is of secondary importance. Primary is the *system's* ability to "grasp" the *nature* of the experience, not necessarily the experience, but its nature, its abstract-able, general, qualities. Without experience, philosophy appears to be just so much idle speculation, armchair thinking, a problem for Dewey and Babbitt. Without aesthetic experience,

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the so-called range of values of the variable" (Quine [1954] 1961, 103; see also Rahn [1989a] 2001, 79).

philosophy appears to have no access to lived experience generally. With which Princeton Theory seems unconcerned until after the Turn. (Recall Maus' discussion of the post-Turn Princeton Theorists as being concerned with aesthetic experience in general. Babbitt, however, elsewhere speaks disparagingly of aesthetics; see 2003, 272–73, 275–76, and 454–55.)

We should question Babbitt's borrowed distinction between the grasping of the nature of experience itself and its relation to observationality. What is the difference between experience and the ability to observe? "Grasp" carries a Cartesian filiation, where we can know but not grasp God or God's complete existence, God's nature. "The nature of experience itself," although again borrowed from Dewey, is an odd phrase, for it implies concern not with any individual(s') inimitable experience, but rather experience, presumably of pieces given the use of "analytical," in general, in the abstract. The obvious questions: how can a system grasp experience in general? What is or how can we know an abstract experience? Who is doing the experiencing here? The system, but systems don't experience unless hypostasized. "The" listener, that still to this day underdefined, abstract category of musical existence? The listener as a generalization, a logic which seems to run: I experience it this way, you are invited to do the same; but also a way out: I'm not committing completely to this hearing. Elsewhere, Babbitt writes, as composer: "Either you run the risk of being too retrospective (which means too obvious), or you run the risk of being too predictive (and therefore being opaque or perhaps losing a reasonable listener). I have to say *reasonable listener* although you know what kind of cop-out that has to be" (1986, 72, emphasis original). As Martin Jay suggests in his

epigraph which preceded this chapter, here is a struggle between individual and collective listener.

Returning to Babbitt's quotation of Dewey, Babbitt appears to be arguing more generally that the post-Turn Princeton Theorists (Randall, Boretz, et al.) believe that their later writings carry a greater fidelity to experience. But since for Babbitt and the formalist phase of Princeton Theory, as discussed previously, all writing about music carries a filiation with experience (because of the verifiability principle espoused by the logical positivists which we shall discuss shortly), the authors of the Turn are mistaken in believing their extravagant texts are closer to experience. We can read the following remarks of Randall as responding to Babbitt, for while the modernist Babbitt will conceive of music-listening as perceiving, as a distanced, disinterested observation, and hence a form of experience susceptible to scientific discourse, the mature Randall seeks to involve himself, and implicitly us, in the music's unfoldings: "In any case, a question 'Can we perceive this structuring?' never seriously arose, since I've never thought of music-listening as perceiving or identifying. (A listener undergoes, or becomes, or simply is, the music, the utterance: is within, happening—not without, observing)" (Randall [1993] 2003, 372). Randall here elevates *Erfahrung* over *Erlebnis*, conceives music-listenings as, "occasions *for* rather than *of* experience." (Goehr 2008, 117–18 and 120 makes this point about experimentalism generally, and Cage specifically.)

Complicating further the problematic of experience on the terrain of temporality, Babbitt, responding directly to Heinrich Schenker and David Epstein (1930–2002)—indirectly, I suspect, to Randall after the Turn—addresses the problematic of grasping discursively musical temporality: "To convey [the

real-time character of perceived musical consecution] in what cannot be, for it cannot be controlled to be, 'real-time' analytical prose or symbolism poses a problem of representation no less severe in degree than, though considerably different in kind from, that confronting the composer. His creative mental imagery must persist in simulating such a real-time eventuality, while yet conveying these images in notational, transcriptional, nonreal time" (Babbitt [1979] 2003, 373). Pieces, analysts, and discourse have their own separate times, alienated from each other. One way to address this problem in the temporal domain has been to jettison the metaphysical language of traditional music criticism, turning to the directly observational language of Princeton Theory in its positivist moment: ("harmonic progression") becomes ("harmony" and "progression") becomes ("simultaneity succession") (Boretz 1969, 16). Thus we do not hear "motion" in our piece; thus we have no need for notational or transcriptional devices in the discursive economy of theory and analysis. But this strikes me as an only apparent solution. Princeton Theory, after *Meta-Variations*, continues to problematize musical time: Babbitt's foreword was written after that text; recall our discussion of temporality in Randall's text and temporalized presence in Heidegger and Boretz from Chapter Two. Experiential temporality is multivalent as between music and discourse, and Babbitt offers no solution to this problematic, but, as I have suggested, reads it out of the texts of the Turn.

In 1962 Babbitt published a group of program notes regarding Schoenberg's Violin Concerto, *Book of Hanging Gardens*, and *Moses und Aron*, reprinted as Babbitt ([1968] 2003), which are rather complicated as program notes go. The following year George Perle (1915–2009) published a critique of these

notes and an article by David Lewin in *Perspectives of New Music*. I would like to discuss Babbitt's reply to Perle, because it is perhaps Babbitt's most direct explanation of his conception of the relations between experience and conceptual thought, evoking a host of notions borrowed from philosophy of science. In the midst of a long, winding defense of his admittedly compact program notes, Babbitt states that, "I not only proved nothing in the logical domain, but made no claims with regard to empirical verification or confirmation" ([1963] 2003, 142). Although understandable considering their status as program notes, and therefore not a report of scientific findings, it is striking to read Babbitt here denying having made claims as regards the empirical, seemingly bracketing what we have been led to believe would be Babbitt's concern for science, and specifically logical empiricism.[22]

Babbitt continues, however, by introducing terms drawn from the philosophy of science, specifically, logical positivism or empiricism. Babbitt: "To the extent that I regard my introductory observations as explanatory 'analysis' at all, it is only as a selection from a rational reconstruction, whose protocol statements derive their relative incontrovertibility by virtue of their being statements of aural and conceptual capacities which appear to be acquirable" ([1963] 2003, 142). What is a rational reconstruction [*rationale Nachkonstruktion*]? What is a protocol statement [*Protokollsatz*]? Let us take each in turn. Coined by Carnap in the *Aufbau*, the notion of a rational reconstruction has taken on a life of its own, separating itself from Carnap. We shall return to Carnap, but among many possible definitions, this one is ready-to-hand: "What epistemology

[22] The difference between the logical and empirical in logical positivism was foundational, and vehemently critiqued by Quine ([1951] 2004, 31–45) as one of the two dogmas of empiricism.

intends is to construct thinking processes in a way in which they ought to occur if they are to be ranged in a consistent system; or to construct justifiable sets of operations which can be intercalated between the starting-point and the issue of thought-processes, replacing the real intermediate links. Epistemology thus considers a logical substitute rather than real processes. For this logical substitute the term *rational reconstruction* has been introduced" (Reichenbach 1938, 5; quoted in Babbitt 2003, 69).

Rational reconstructions of musical cognition abstract away from at least the temporality of musical experience. In Babbitt's ambivalent words (ambivalent with respect to our broader question regarding experience): "A rational reconstruction of a work or works, which is a theory of the work or works, is, thereby, an explanation not, assuredly, of the 'actual' processes of construction, but of how the work or works may be construed by a hearer, how the 'given' may be 'taken'" (Babbitt [1972] 2003, 301). And: "It is not the presumed purpose of a rational reconstruction to propose the probable actual modes of construction, but rather the most satisfactory modes of construal" (Babbitt [1976] 2003, 355). Or, according to Carnap in the *Aufbau*, "The fact that we take into consideration the epistemic relations does not mean that the synthesis or formations of cognition, as they occur in the actual process of cognition, are to be represented in the constructional system with all their concrete characteristics" (Carnap [1928] 2003, §54). And, "the construction does not have to reflect the actual process of cognition, but that it is only a rational reconstruction which must lead to the same result" (Ibid., §81). The historical actuality of composerly creation is not at issue in the formal modeling of the conceptual steps necessary for a rational reconstruction of musical cognition, the

conceptual steps necessary to arrive at, for example, the surface of a piece. As historians, we will not, in discussing rational reconstructions, attempt to access the steps Schoenberg went through while composing his Violin Concerto, for example. Rational reconstruction is not sketch study, it does not answer the question of the historical how. It is decidedly not historical musicology; it writes an imagined past; it brackets composerly intention. Important, instead, are the most musically profitable (read: interesting, "satisfactory") ways in which we may construe theories, of how we might cognize music.

Returning to Babbitt, let us now ask, what is a protocol statement [*Protokollsatz*]? There is no single answer, as the logical positivists—especially Carnap, Otto Neurath, and Moritz Schlick—argued over a protocol sentence's exact nature. Introduced into logical positivist discourse by Neurath ([1932] 1959, 199), a protocol statement was an attempt to answer the question of how to include knowledge of experience in science, via observation. Protocol sentences are direct records of an observation, available to other scientists for confirmation or verification. From here, however, disagreement emerges. For Neurath, protocol sentences are the factual sentences of which science consists, which include a personal noun, "and a term from the domain of perception-terms" (Ibid., 202–3). "A complete protocol sentence might, for instance, read: 'Otto's protocol at 3:17 o'clock: [At 3:16 o'clock Otto said to himself: (at 3:15 o'clock there was a table in the room perceived by Otto)]'" (Ibid., 202). The problem with this account is that it makes protocol sentences subjective—how can such perception-statements serve as the foundation for science? Carnap's rebuttal: "The view which holds that protocol sentences cannot be physically interpreted, that, on the contrary, they refer to something non-physical (something 'psychical,' some

'experience-content,' some 'datum of consciousness,' etc.) leads directly to the consequence that every protocol sentence is meaningful only to its author" (Carnap [1932] 1959, 192). This raises the problematic of solipsism, which we shall consider during the next chapter, but we should note here that it was an unacceptable conclusion for the Carnap of the 1930's, and so he conceived of protocol sentences instead as physical statements about objects in the world: "This wooden support is very firm" (Ibid., 170). For Carnap, "the *physical language is universal and inter-subjective*" (Ibid., 166, emphasis original).

Can we figure out to which sense of "protocol sentence" Babbitt was referring? Babbitt seems to offer his interpretation of "protocol sentence" when he says that, "protocol statements derive their relative incontrovertibility by virtue of their being statements of aural and conceptual capacities which appear to be acquirable" (Babbitt [1963] 2003, 142). Babbitt states his reason for the subjunctive ("acquirable") nature of the perceptions which concern him: "Naturally, I cannot assume responsibility for what is 'heard,' but only for what can be learned to be 'heard.' Otherwise, I should be at the mercy of the inadequate training, knowledge, intellectual capacity, and dubious veracity of any listener offered as counterexample" (Ibid.). This alone means that Babbitt is not using protocol sentences in the previously defined, logical positivist sense, and is instead introducing his own definition, adjusted for music theory. We are left uncertain, however, as to the scientific status of Babbitt's claims, and their experiential qualities. Indeed, Babbitt draws the distinction between, "that mode of analysis which purports to be the representation of a reported hearing and that which is a rational reconstruction" (Ibid.). Recall that he stated that his is a rational reconstruction, not, therefore, a report of a hearing in a direct sense, so

why state that his introductory observations were or included protocol sentences?

Again, Babbitt states that in his program notes, "I not only proved nothing in the logical domain, but made no claims with regard to empirical verification or confirmation" ([1963] 2003, 142). Again, he need not have, because these comments refer to mere program notes, but it is striking that in Babbitt's entire discursive corpus, this is the only explicit reference to verification of the sort discussed by the logical positivists who influenced Babbitt so strongly as to scientific outlook. We should expect Babbitt, the self-proclaimed logical positivist, to subscribe to and offer examples of protocol sentences one could verify experientially. Ayer ([1936] 1952, 5) describes verificationism this way: "A sentence had literal meaning if and only if the proposition it expressed was either analytic or empirically verifiable." "To verify" in the early theory meant to *have* the experience. Misak (1995, 70) refers to this as the "strong version" of the logical positivists' theory of verifiability and recall Dewey's discussion of *having an* experience. A number of problems arose, however, which included questions about theoretical entities postulated by physics, which explained experiences but which were not themselves verifiable via sense experience (recall our earlier discussion of physics); and questions about the past, counterfactuals, and the future (Ibid., 70–82). Protocol sentences were one attempt to arrive at experiences which could be verified, and later verisons of the principle held that one need not *have* the experience, but rather *reduce* sentences to those which referred to experiences (Mises [1951] 1968, 95–6). Carnap, for example, later says that, "A person S *tests* (verifies) a system-sentence by deducing it from sentences

of his own protocol language, and comparing these sentences with those of his actual protocol" (Carnap [1932] 1959, 166, emphasis original).

To repeat, Babbitt argues that, "naturally, I cannot assume responsibility for what is 'heard,' but only for what can be learned to be 'heard.' Otherwise, I should be at the mercy of the inadequate training, knowledge, intellectual capacity, and dubious veracity of any listener offered as counterexample" ([1963] 2003, 142). As stated, a curious feature here is that Babbitt appeals not to actual abilities on the part of informants or potential experimenters, but rather subjunctively, in principle, to one who could verify his claims. This appears to be a social—better, pedagogical—problem, for Babbitt phrases it as such, and elsewhere discusses the poor state of music education in the U.S.A. (Babbitt [1991] 2003, 453). Further, Babbitt has made this gesture before: "The limits of music reside ultimately in the perceptual capacities of the human receptor, just as the scope of physical science is delimited by the perceptual and conceptual capacities of the human observer. But the recent history of both disciplines, by bearing witness to explosive and decisive extensions of these capacities, constrains us from venturing only into the realm of prediction" (Babbitt [1961] 2003, 84). In fact there is a precedent in logical positivist discourse for this move toward the future, the subjunctive, which is known, simply, as "verifiability in principle." As Mortiz Schlick says,

> It is obvious that verifiability is used here in the sense of "verifiability in principle," for the meaning of a proposition is, of course, independent of whether the conditions under which we find ourselves at a specified time allow or prevent the actual verification…. The verification remains *conceivable*; we are always able to state what data we should have to experience in order to decide the truth or falsity of the proposition; the verification is *logically* possible, whatever be the case regarding its

> practical feasibility, and this alone concerns us. ([1932] 1959, 88, emphasis original)

Or as Carl Hempel puts it:

> As has frequently been emphasized in empiricist literature, the term "verifiability" is to indicate, of course, the conceivability, or better, the logical possibility of evidence of an observational kind which, if actually encountered, would constitute conclusive evidence for the given sentence; it is not intended to mean the technical possibility of performing the tests needed to obtain such evidence, and even less does it mean the possibility of actually finding directly observable phenomena which constitute conclusive evidence for that sentence—which would be tantamount to the actual existence of such evidence and would thus imply the truth of the given sentence. ([1950] 1959, 111 n 6)

I cannot help but psychologize: the frequent statements of the obviousness of verifiability in principle betray a tension, cover a process of argument and in fact an uncertainty about the position. For if the observation sentences never have to admit of verifiability in actuality, how can they be said to be true? Would not this continual delay, in principle, of verification render *any* statement potentially meaningful? All that is needed is the *imagination* to conceive possible worlds in which the relevant conditions would hold that could prove or disprove the sentence under consideration. As Misak (1995, 71) says, under this conception, "'wait and see' is a method of verification." And further, Schlick for one saw no problem with the hypothesis of immortality, since, "'wait until you die' is an appropriate method of verification" (Ibid., 73). I quote yet another statement from Misak because she raises a difficult question about the audibility of music analysis, an issue which music theory has never truly settled, but rather has simply moved on from: "If the temporal, physical, and other restrictions on

verificationism are eliminated altogether, verificationism loses all appeal for the empiricist. What empiricism is after all is a view of ourselves in the world which is down to earth, which does not appeal to anything beyond observation and inquiry. If we do not have restrictions on the endowments of knowers, then we do not have something that is empirical enough for the empiricist" (Ibid., 142).

W. V. O. Quine, on the other hand, marked post-positivism or analytic philosophy by arguing that we do not verify individual propositions, but rather we verify propositions holistically, as a "corporate body," rearranging our conception of the theory/experience relation:

> Our statements about the external world face the tribunal of sense experience not individually but only as a corporate body…. The totality of our so-called knowledge or beliefs, from the most casual matters of geography and history to the profounder laws of atomic physics or even of pure mathematics and logic, is a man-made fabric which impinges upon experience only along the edges. Or, to change the figure, total science is like a field of force whose boundary conditions are experience…. But the total field is so underdetermined by its boundary conditions, experience, that there is much latitude of choice as to what statements to reevaluate in the light of any single contrary experience. No particular experiences are linked with any particular statements in the interior of the field, except indirectly through considerations of equilibrium affecting the field as a whole. ([1951] 2004, 49–50)

I find it unsurprising how little traction this foundational critique of logical positivism has gained within music theory. Theory still struggles with experience, even in the analytic or post-positivist writings of Babbitt's students. Throughout all of this struggle, the appeal to experience is vexed but strong. While, as Dahlhaus says, "the alternative that an element of the composition be either audible or inaudible is too rigid and crude to be adequate" ([1970] 1983, 55), we should expect greater discussion by Babbitt himself of the notion of

verification, and yet it is strikingly absent, seems inoperative in Babbitt's discourses. In terms of Babbitt's work, his adjustment of logical positivism's claims to experience may be understandable—may arrive via the problem of finding "suitably equipped receptors" to verify his musical claims—but the conclusion we arrive at is, if Babbitt consistently delays discussion of experience, brackets the physical status of musical objects via a denaturalization of music theory, and nowhere attempts to verify his experiences, in whole or in part, how is he a logical positivist?

In his Madison lectures, however, Babbitt discusses the issue of audibility directly, but seems to overturn the importance of empirical considerations in music theory and analysis, implying cognition is far more important than experience:

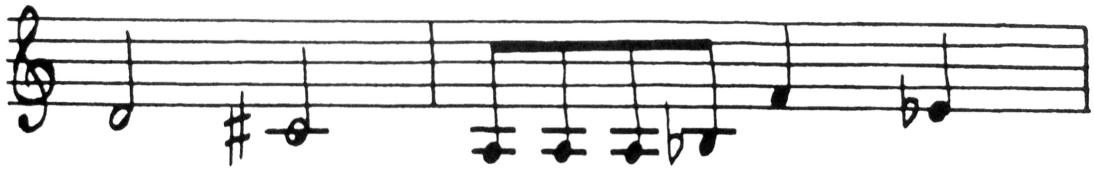
> Let's get back to [Schoenberg's] Fourth Quartet and the relationship between hexachords. When somebody says, "Can you hear these things?" the answer is that it's not a matter of hearing. Of course you can hear these different notes. "Hearing" is one of those expressions that seems to represent a high degree of humanistic professionalism. But it's not a matter of hearing; it's a matter of the way you think it through conceptually with your musical mind. You can hear those six notes in example 1-8a. You hear where they are in register. You would certainly hear the contour difference if I played the hexachord in example 1-8b with the F♯ an octave higher than it is written. You'd hear everything. So it's not a matter of whether you hear it, it's a matter of how you conceptualize it, how you conceive it.[23]

If we identify hearing with experience, then experience is a secondary concern for Babbitt here. *Thinking* music is far more important, for, as with the Carmichael experiments to be discussed shortly, how we think will influence our

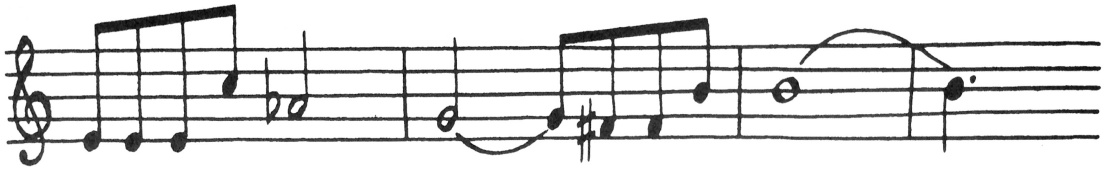
[23] Babbitt (1987, 23). Girard (2007, 252–56) has a different story to tell here.

perceptions, therefore thinking acts causal on perceiving. To have knowledge is, in one sense, to know causes, thus the importance of causes for Babbitt and music theory generally.

Example 3.1: Babbitt's Example 1-8a: Schoenberg, Quartet No. 4, First Violin



Example 3.2: Babbitt's Example 1-8b: Schoenberg, Quartet No. 4, First Violin



As Babbitt says elsewhere, tying perception and memory to thought and language:

> If we're discussing the capacity to hear things and the capacity to identify them verbally, we're into the whole question of associated verbal concepts…. The verbal concepts that you associate with what you perceive [are] obviously going to have a great effect in the whole memorative process. We're back to the old Carmichael experiments again…. We're all talking about memory, about increasing memory span, and therefore we're back to that question of verbal responsibility. (Westergaard [1966] 1968, 69–70)

In 1932 Leonard Carmichael and colleagues at Brown University reported on a series of experiments which attempted to determine the conditions which affect visual perception of form, in this case, language's affect on visual perception (Carmichael, Hogan, Walter 1932, 73). "In the investigation here reported an effort was made to direct experimentally the changes in the reproduction of visually perceived form by the use of language" (Ibid., 74). A set of twelve ambiguous figures was presented along with one set of words to one group; another group of participants was presented the same images but a different list of words. A control group was presented with images without words. See Figure 3.1 for two examples. The results showed that those presented with the curtains/diamond image and told the image resembled curtains, were inclined to draw an image that was unambiguously curtain-like, whereas when shown the same image but told it resembled a diamond in a rectangle, other participants were more apt to draw an unambiguously diamond-like figure. See Figure 3.2.

Figure 3.1: Images and Words (Carmichael, Hogan, Walter 1932, 75)

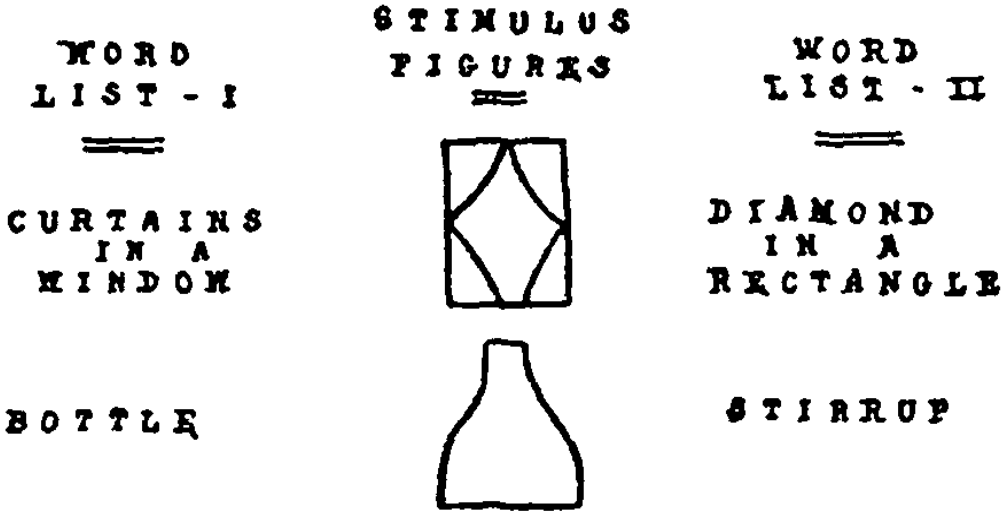
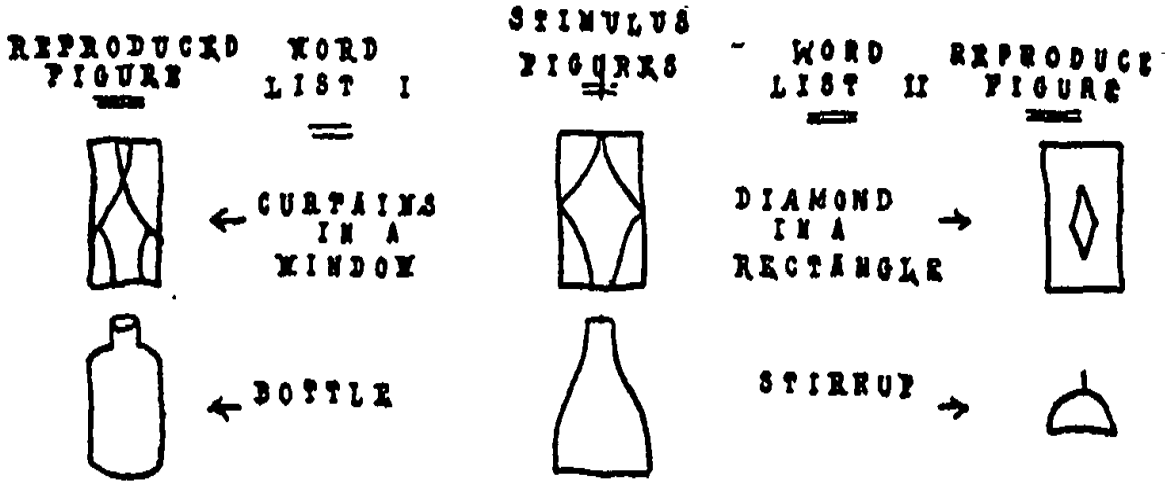


Figure 3.2: Words and Images (Carmichael, Hogan, Walter 1932, 80)

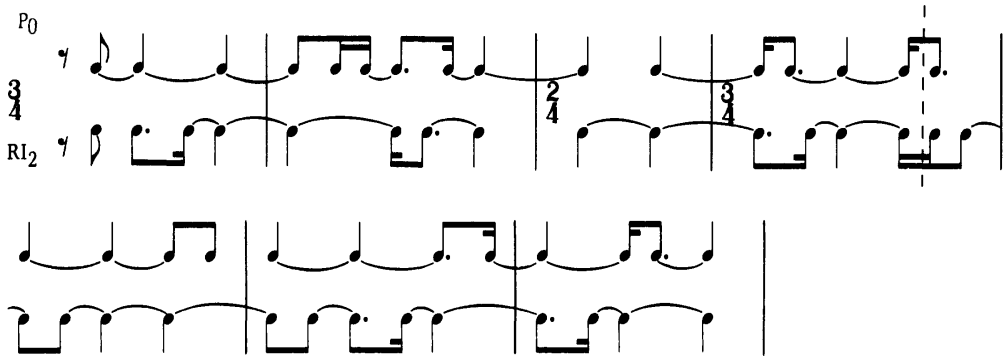


What was the major conclusion? "Naming a form immediately before it is visually presented may in many cases change the manner in which it will be reproduced" (Ibid., 81). Which shows that, "the reproduction of forms may be determined by the nature of words presented orally to subjects at the time that they are first perceiving specific visual forms" (Ibid., 82). And further, that, "not the visual form alone, but the method of its apprehension by the subject determines, at least in certain cases, the nature of its reproduction" (Ibid., 83). Babbitt applies this to the aural case: "The verbal concepts that you associate with what you perceive [are] obviously going to have a great effect in the whole memorative process" (Westergaard [1966] 1968, 69–70). This is only obvious in hindsight, because of Carmichael's experiments. Babbitt further draws the conclusion which Carmichael, at least in 1932, avoided, which is that language and therefore verbal thought acts causally upon aural and therefore musical perception. Thus *thinking* music is more important for Babbitt than *hearing* it.

But further, we must exercise care with the words we use to describe or explain music (an issue to which we shall return in Chapter Five).

Metatheoretically or philosophically, Princeton Theory seems at certain of its moments caught in the cross hairs of the dialectic of experience and theory, but even in its musical practices, its compositions, Princeton Theory cannot avoid the idealist implications of musical thought, of music theory as a rational pursuit. See Example 3.3. After detailing the ways in which Babbitt's Composition for Twelve Instruments (1948) instantiates P_0 and RI_2, Peter Westergaard closes by confessing that, as the piece unfolds, "I see no way for the ear to distinguish those attacks which define durations for P_0 and those which define durations for RI_2. Thus, I see no way for the ear to perceive order or content" (Westergaard 1965, 118; see also Taruskin 2005, 165–69).

Example 3.3: Westergaard's Example 13: Duration sets for Babbitt, Composition for Twelve Instruments (1948)



I thus see no evidence that experience was the sole or even ultimate authority in even Babbitt's writings. But perhaps we have been looking in the wrong place;

perhaps we should not look to Princeton Theory's music-theoretical writings but rather its *compositions*. Following Quine, we may then judge the theory/practice relation as a corporate body, as embodied in the Princeton School's *pieces*.

In order to pursue this point within music theory, however, let us consider comments by Michael Schuijer, who has recently condemned pitch-class set theory for its purported lack of aural testability. Although overstating this lack, and not pushing the issue far enough in another direction, Schuijer's statements should cause concern for the scientifically-minded music theorist:

> Pitch-class set theory also stands condemned for its failure to explain how music makes sense aurally. We often think that analyses of music should somehow reflect the way in which we hear it, or at least could *learn* to hear it. This is a concern of the music theory teacher, who helps students develop their hearing skills. But it is also a concern of those looking for a basis of scientific verification of analytical theories. A theory that tells us how we *hear* music can, in principle, be tested (that is, if we come to agreement about who "we" are); a theory that tells us how it has been *conceived* cannot. Now, for a listener-based theory of music to be potentially testable, it should not merely produce interpretations of scores, but should also address the process through which such interpretations come into being. (2008, 23, emphasis original)

It is less than obvious, however, that pitch-class set theory is not aurally testable. The motions between the learned, heard, and conceived are far more complicated than Schuijer would seem to allow, as we have discussed in this chapter. I have always assumed that the Princeton Theorists were able to aurally perceive everything they discussed, not least because of the composerly closeness to their materials. Further, entire pedagogies, as the author intimates, are devoted to such experiments. And Babbitt, at least, long ago decided for himself who the

"we" are.[24] But assuming Schuijer's conclusions, if the theory's propositions are not capable of reduction to observation sentences, or if we will not accept such propositions as theoretical terms, or if we will not accept the subjunctive motion toward the potentially testable, then not only does the scienticity of the theory—any theory—lie open to question, doubt, but in the last analysis, the theory must be metaphysical. This seems to be Westergaard's threat: if the ear cannot perceive Babbitt's theoretical entities then those entities are not testable, and if not testable, they lack cognitive content, are metaphysical. As Misak said, quoted earlier, "If we do not have restrictions on the endowments of knowers, then we do not have something that is empirical enough for the empiricist" (1995, 142). Music theory treats all aural problems as failures of the subject, but in this reading the problem would not be with the subject but with the test itself—the piece or example. Babbitt, we imagine to his own great chagrin, despite himself, and to our great surprise, turns out to be a metaphysical composer. High modernist music theory—despite its often scientific pretensions and by its own standards—turns out to be a metaphysical discourse, lacking cognitive content, neither confirmable nor falsifiable, neither true nor false, evocative perhaps, but literally meaningless.

[24] See Babbitt ([1958] 2003, 50), for mention of the listener as "a suitably equipped receptor," and recall Babbitt's (1986, 72) "reasonable listener." Lewin ([1993] 2007, 66–67) discusses Nicholas Cook's use of the locution "the listener."

4. Lewin's Denaturalization of Music Theory

Early in his treatise *Generalized Musical Intervals and Transformations*, David Lewin implicitly dismisses physicalism (the assertion of physical objects as the primary building blocks for the system, to which Carnap will turn after the *Aufbau* and by the 1930's) from the conversation to follow, asserting, again implicitly, phenomenalism in its place.[25] During section 2.1.5, Lewin states that, "I do not think that the acoustics of harmonically vibrating bodies provide in themselves an adequate basis for grounding" intuitions of "distance" or "motion." He continues: "For instance, when we write int(C4, F♯4) = 45/32 (= 2^{-5} $3^{2}5$), I do not believe that we are intuiting a common partial frequency F♯9 for both C4 and F♯4, a partial which is intuited forthwith in some harmonic space as both the 32nd partial of F#4 and the 45th partial of C4. Nor do I believe that we intuit a path in harmonic space which corresponds directly to a compound series of individual multiplications and divisions by 2, 3, and 5" ([1987] 2007, 17–8). This argument by negation, as it were, accomplishes a number of goals for Lewin: it critiques the overtone follies (Babbitt [1965] 2003, 198), displacing acoustics as a foundation for music theory; critiques what would be an improper use of mathematics as model for music theory; and displaces in turn physicalism. Lewin will go on to describe and develop "an actual harmonic intuition" he has regarding C4–F♯4, during which he will implicitly assert phenomenalism as his

[25] Recall that although Lewin was appointed to Yale University (and eventually Harvard University), and achieved a certain disciplinary transcendence—his creation of his own theoretical tradition—he earned his M.F.A. in 1958 at Princeton University under Babbitt, in the same class as Winham and Randall (Blasius 1997, ix), and was an editorial board member of and published consistently in *Perspectives of New Music*.

philosophical foundation: the entities we discuss in music theory are not physical, they are aural/mental, and arrived at via intuition, intuitions which, importantly for Lewin, "are highly conditioned by cultural factors," yet which are available to introspection.[26] Lewin, due in part to his (over)use of the notion of intuition, would seem the most experiential of Princeton Theorists: by implicitly appealing to phenomenalism he builds experience into one of the early moves of his system, and time and again we are invited to hear, to actually experience, the results of his investigations.

But it would be too quick a move to assert that Lewin's discourse maintains itself at the level of experience. While implicitly appealing to phenomenalism, his (proper) use of mathematics is highly abstract, and while we might usually conceive of the power of these abstractions as precisely that which enables him to return to musical experience in an enriched manner, with intensity, as Bo Alphonce has said of *GMIT*: "The cream of the [Webern Piano Variations, Op. 27] analysis, the important decisions, are altogether based on criteria from outside the GIS [Generalized Interval System] model, emanating from the experience of the analyst…. The specific GIS was triggered by an intuition that its particular properties would highlight relations the analyst would find interesting. The formal apparatus guaranteed consistency; criteria for significance remained extrinsic" (1988, 173–74). Mathematics as stand-in for conceptual thought, in Alphonce's reading, stands outside of experience, both in the sense of a particular experience of a passage, and the analyst's (Lewin's) cumulative life-experience with music (analysis). *Erlebnis* and *Erfahrung*, respectively.

[26] Lewin ([1987] 2007, 17). Rings (2011, 17–19) outlines Lewin's use of "intuition."

Indeed, because theory and mathematics partially stand outside and yet gaze in on audible musical experiences, Lewin's discourse often reenacts A. B. Marx's pedagogical and analytical methodology. That is, Lewin's discursive motions (especially in *GMIT*) drift between what Marx would have called *Anschauung und Tat*: contemplation (intuition) and action, a process which presents, for Marx, an *artistic* not scientific consciousness.[27] In Ian Bent's description, "Marx's detailed analysis [of Beethoven's Ninth Symphony] constantly oscillates between subordinate detail and superordinate structure, and at the same time between objective technicality and subjective response" (1994, 124). This methodology, transposed to Lewin, often acts as a kind of pendulum, swinging gently between mathematical speculation and analytical experience, and in this sense the two mediate and transform each other, offering different perspectives on similar phenomena.

A different model for how Lewin mediates the formal and experiential domains in music analysis from that proposed by Alphonce, and from this *Anschauung und Tat*, occurs during Lewin's discussion of Figaro's counting mistakes in the opening duet, "Cinque… dieci… venti… trenta," of *The Marriage of Figaro* (Lewin [1995] 2006). See Example 3.4, which reproduces Lewin's Example 1.9 (Ibid., 15). Arrayed as though a linguistic, indeed paradigmatic analysis, Lewin's "passes" organize not only Lewin's listening and understanding, but also Mozart's music, for Lewin here projects onto Mozart and his music Lewin's multiple passes through the music.

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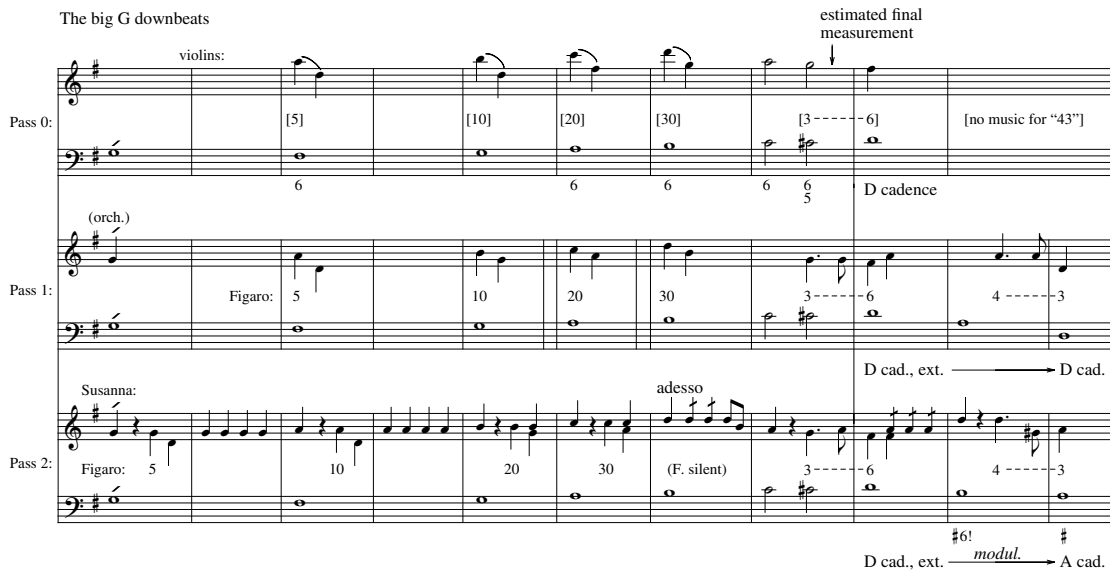
[27] Marx (1997, 19 and 31); see pp. 37–46 for an example of this process in action. On p. 7 of the same work, Burnham compares the process to Goethe. Goethe in the space of Princeton Theory puts us in mind of Don (1996), which relates Goethe to Schenker to Boretz post-*Meta-Variations*.

Example 3.4: Lewin's Example 1.9, "Mozart, *Marriage of Figaro*, I, opening duet, Passes 0–2."



Mozart here composes multiple passes through the same music, as if Mozart along with Susanna attempt not only to correct Figaro's errors in reckoning, but to understand the original music more accurately: in Lewin's analysis, the various motions from I to V and V to I, the recursive embeddings of multiples of five, until the breakdowns at 36 and 43.

As stated, Lewin himself passes through this music, in music-analytical time, multiple times (I have not counted, but I would say far more than ten times, if we include the musical and textual examples). But this is not a Schenkerian early to late, background to foreground or back again motion, rather here is a "left-to-right," forward in chronological time, diachronic, performance-based, piece-time musical temporality, through each pass. On nearly the last pass, while describing his example, Lewin says that his example,

> beautifully illustrates Mozart's virtuosity in projecting large-scale rhythmic complexities. There are different time-systems on the example. In one system, we count the passing of time by the progress of the bass line; this is the system that controls the underlay format of the example. A second, different, system marks the passage of time by the Newtonian or Kantian time-flow of the measures; in this system, Passes 0 and 2 contract the longer time-flow of Pass 1, presumably reflecting Figaro's anxiety. A third and yet different time-system marks the passage of time by the numbers 5, 10, and so forth of Figaro's measuring series; this is the time-system in which Figaro's "Cinque" of Pass 2 is judged as one and a half measures too soon, rather than a half-measure too late. ([1995] 2006, 18)

Lewin here assigns three different and successive temporalities to Mozart's music, but it becomes difficult to separate out Lewin's subjectivity from Mozart's (or that imputed to Mozart): who composed this example, which "beautifully illustrates Mozart's virtuosity?" Is Lewin saying that his own example is beautiful, or that Mozart's temporalities are beautiful? Who created these multiple temporalities? Mozart or Lewin? Mozart, through his virtuosity? Lewin, through his multiple passes through this music? Mozart, through *his* multiple passes through this music? Lewin becomes so enthralled by temporality here that he loses not only his grasp on musical experience, nor solely the origin of "the" music, but indeed his own subjectivity as an individual person. Recall that Lewin starts and ends the article by discussing Freud on, "erroneous performance, such as misspeaking, misreading, mishearing, and mislaying" (Ibid., 5; see also, Freud [1916] 1966). All of this is not to mention the evocation of both Newtonian *and* Kantian (!) means of reckoning time within a single temporal system. There are so many temporalities at play here, so many ways of reckoning time, so many implicit histories, the effect is dizzying. If I may project myself, I would suggest this was precisely Lewin's intent, his peroration creating this effect. In comparison, the Schenkerian sketch Lewin

then offers emphasizes teleology, cutting across the circularity of the passes. This does capture a certain musical experience: Figaro's tense, expectant, anxiety. Further, the superimposition of passes 0–3, which are rotational or cyclical, onto the linear Schenkerian sketch nicely conveys the multiple temporalities—linear and non-linear—of the duet. But the notion that we are to experience in any given moment or in any straightforward sense all that Lewin discusses seems fantastical. In fact, precisely the multiple "passes" through this music, although perhaps representing a kind of learning process, remove one from the typical, rounded experience we ideally attribute to our musicalities. A discussion of music, then, can inform experience without itself being a one-to-one mapping or narration of that experience. As Kofi Agawu says of his own Beethoven Op. 18, no. 3/1 paradigmatic analysis, "We have heard it, however, not in Beethoven's temporal or real-time order but in a new conceptual order" (2008, 196). The nature of the experience of that conceptual order is complex, underdetermined, and under-discussed in Lewinian discourse.

Given Lewin's general silence regarding methodology—unique amongst Princeton Theorists, whose project was in large measure meta-theoretical, epistemological—when he does mention it explicitly we tend to grasp onto the parcel, repeating it frequently as if a mantra, though perhaps not critically. (This is especially apparent in the many reviews of *GMIT*.) For instance there is the following, often quoted, "point": "This is the methodological point: It is unfair to demand of a musical theory that it always address our sonic intuitions faithfully in all potentially musical contexts under all circumstances. It is enough to ask that the theory do so in a sufficient number of contexts and circumstances. Perhaps, too, it is fair to ask that the theory be *potentially* able to address our

intuitions in any given musical situation, provided that the situation develops in a suitable musical manner" ([1987] 2007, 85, emphasis original). Yet after the Chopin B♭-Minor Sonata analysis that, as Lewin intends, proves his point, he repeats himself, now reintroducing the theme as a normative "claim": "To repeat my methodological claim: One should not ask of a theory, that every formally true statement it can make about musical events be a perception-statement. One can only demand that a preponderance of its true statements be *potentially* meaningful in sufficiently developed and extended perceptual contexts." (Ibid., 87, emphasis original) Why should Lewin take us through this process, this argument? Why should Lewin appeal to intuition? "Intuition" here defined with the help of the predicate "sonic," thus "intuition" here meaning something like perception or experience. Or, phrased discursively, perception-statement. Again, why should Lewin appeal to intuition?

An answer is that music-theoretical discourse often betrays an anxiety when confronted with its own abstractions from the auditory reality of musical phenomena, which demonstrates just how far our discourse is from assuming a kind of *musica mundana* or metatheoretical, speculative basis, as discussed previously. Lewin's work constructs itself as at once theoretically advanced, abstract, mathematical, *and* musically real, phenomenological, grounded, in a word, intuitive. Thus, it is the situating of Lewin's work within a tense, at times contradictory realm that leads to his desire to comment on the roles of perception statements and formally true statements within a methodological point/claim. But it is not merely that, for Lewin, music theory is conceptual, in deference to lived musical experience, nor thoroughly experiential: it is that musical discourse must be both situated in the middle of, and held fast at, these two extremes of

register. Within the consideration of musical discourse more broadly construed, Lewin's comments have a real payoff. Lewin's writings are both musically abstract and concrete, and it is both the accordance of these two domains *and* their strictly held dichotomy that is fruitful for him. Lewin equivocates on the reality of music: it is at once both concrete and abstract; but he equivocates further: theory may both mediate between these two poles and keep them at a distance.

Lewin's point/claim sounds remarkably similar to Quine's critique of logical positivism, quoted earlier. As Quine has said, "I characterized science as a linguistic structure keyed to experience here and there…. Theory is empirically under-determined" ([1975] 2004, 298–99). While Lewin does not appeal to a "corporate body" or holism of theory/experience, and in addition adds Babbitt's move to the potential, nonetheless Lewin posits a similar relaxation of the demand for the audibility of theoretical postulates. Dubiel (2007) has spoken of Lewin's, "intense concern with every construction's relation to hearing (which need not mean anything so simple as that every construction is heard)."

Let us recall that for Lewin, our intuitions "are highly conditioned by cultural factors" ([1987] 2007, 17). Why would Lewin be concerned to point this out? One answer involves the history of music theory. At the beginning of a reading of François-Joseph Fétis' story describing his discovery of the laws of *tonalité*, Lewin moves swiftly to isolate three "theses":

1. *Tonalité* is an *Anschauung* whereby human cultures perceive, articulate, and organize their various relationships among tones, whether the tones be successive or simultaneous.

2. "Nature" does not provide us with the ratios of small, whole numbers, to be validated by philosophy, mathematics, or physics, as a basis for one and only one "true" *tonalité*. Rather, "Nature" provides humankind with only a raw continuum of pitches (timbres, durations, intensities, etc.).

3. From this musical State of Nature, different human cultures, with different *Anschauungen*, perforce perceive, articulate, and organize tonal relationships in different systems, projecting a wide variety of *tonalités* both geographically and historically. (Lewin 1987, 1 and 3, n 2)

Reading intuition into the dawn of the notion of tonality, although Lewin here admits that for Fétis' certain raw acoustical stimuli lie anterior to human intervention through culture, Lewin's purpose is to *denaturalize* music theory.[28] To restate Lewin's appeal from *GMIT*, discussed earlier: "Personally, I am convinced that our intuitions are highly conditioned by cultural factors. In particular, I do not think that the acoustics of harmonically vibrating bodies provide in themselves an adequate basis for grounding those intuitions" ([1987] 2007, 17). Read against our earlier comments regarding physicalism and phenomenalism, Lewin is arguing that although musical materials begin in the physical realm, it is only through acculturation, *as phenomena*, that they acquire what we might describe as their musicality. If music theory was solely concerned with perception statements, experience, it would reduce music to a corpus for music cognition, thus naturalizing music and the discipline of music theory. (Recall Lewin's implicit critique of music cognition in his 1986 phenomenology article.) Alternatively, if music theory was identified with mathematics, it would be solely speculative, thus naturalizing music and the

[28] I would argue that Lewin performs history of theory in what Nietzsche calls the monumental mode of history, which is the mode in which that *which was* is construed as *might be*, again—a kind of presentism; see, Nietzsche ([1874] 1997).

discipline of music theory. Lewin holds the two extremes in tension in his writings.[29]

As a final example of Princeton Theory's motion toward the conceptual, the non-empirical, let us consider another of Lewin's famous methodological points/claims: "We must conceive the formal space of a GIS as a space of theoretical possibilities, rather than as a compendium of musical practicalities."[30] Lewin goes on to back away from this claim, hedging the ideal or subjunctive quality of theoretical possibilities with discussion of "actually stated musical material," (Ibid.) but the methodological point stands, maintains its status as a declaration, and in turn points us away from that which may simply be experienced: "On the other hand, in other compositional or theoretical contexts, the space S of a GIS might be pertinent as an entirety only to the extent it is suggested or implied by the actually stated musical material, plus the characteristic relationships actually employed" (Ibid.). Ultimately, then, perhaps for Lewin music-theoretical experience is in fact *unproblematic*: as stated, it fluctuates between *Anschauung und Tat*. Tracing that fluctuation, its movements, is the problem.

The reason that Lewin would want to denaturalize music theory at such a late date is that music cognition had gained traction, but also that the alternative

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[29] Recall too the seemingly endless "Nature vs. Nurture" debates prevalent during the 1980's, to which Lewin is clearly here responding.

[30] ([1987] 2007, 27). Lewin's understanding of the GIS as a space of potentialities recalls the Riemannian *Tonnetz*. Recall, too, that Hugo Riemann studied with the philosopher Hermann Lotze (1817–1881), for whom, "the common understanding of 'reality' as an empirical existence of things was… subsumed under the much broader reality of ideas, as a network of logical relations" (Rehding 2003, 84).

to the musical hearing of a trained, charismatic theorist, seems to be an appeal to the basest of musical abilities, "natural," beyond our control. There is an utopian moment in these texts, a moment where the music theorist breaks the bonds of nature—of what must be heard—and hears music anew, imagines that which could be heard, and changes her life.[31] This is freedom for the music theorist, an issue to which we shall return in Chapter Five.

Throughout this chapter I have argued that "experience" is a problematic notion for Princeton Theory, given that the tradition recognizes both the importance of the trained, charismatic theorist's ability to aurally perceive musical entities, but also precisely the conceptual motion in thinking theoretically about music. Along the way I have argued that Princeton Theory problematized the notion of what music theory is—whether it is explanation, description, or metatheory; that it problematized the "stuff" of music theory—its most fundamental entities; that Babbitt problematized the role of experience in an empirical science about music; and that Lewin sought to denaturalize music theory by problematizing any notion of a simple relation between experience and conceptual thought. Sometimes Princeton Theory holds fast to either experience or conceptual thought; sometimes it seeks to mediate the two extremes; sometimes it appears uncertain of where it stands as regards the two; at other times it (meta)theorizes the distinctions and relations, if at times inconsistently. Precisely such inconsistency, I would argue, rather than robbing music theory or Princeton Theory of its scientific or humanistic pretenses, makes the discourses more robust, interesting, and problematic.

[31] Recall that in his virtual debate with Nicholas Cook, Lewin (mis)quotes Rilke to the effect that changing one's musical life is the goal of music theory (Lewin [1993] 2007, 53–67). We shall return to this in Chapter Five.

IV. Solipsism

You're perfect / Yes it's true
But without me / You're only you.

—Faith No More, "Midlife Crisis"

Now the world is gone / I'm just one.

—Metallica, "One"

I have never felt further away from humans than now. Every word that escapes my mouth is a solipsism. Every move I make is solipsistic. Solipsist. Look it up, insect…. See my face? It's part you, part what you made me. I have disappeared into you. You are the Solipsist, I am nothing but an extension of you…. Solipsist, motherfucker. Yeah, the world is an extension of me. You're living in my vision.

—Henry Rollins, *Solipsist*

Solipsism binds us together.

—David Foster Wallace, "Westward the Course of Empire Takes Its Way"

But the experimental Turn and theorized experience carry a further problematic, and that is the problematic of how musical experience could ever be shared, at all, let alone in something approaching its totality of richness and uniqueness. One answer to the question is simply to deny that experience can be shared: to assert no possibility of intersubjectivity. Another related yet more extreme position, is that of solipsism.

I would like to quote definitions of solipsism from a text read at Princeton some time around October 25, 1961, during a course given by J. K. Randall (Randall 1961, b. 41 f. 4; see also Snyder 2012, 8). This text was commonly

referred to as "Runes' Dictionary," i.e., the *Dictionary of Philosophy* edited by Dagobert D. Runes (Runes 1960). While Randall assigned entries to his students by Alonzo Church (1903–1995, who was professor of mathematics and philosophy at Princeton during this time) on everything from descriptions, function, and formal logic to number, fellow Princeton professor Ledger Wood's (1901–1970) entry on solipsism was also included in this volume, and while not specifically assigned, would have been a valuable reference source, and is illuminating for its historical texture, providing an entry point into the topic as was available to Princeton Theorists at that time:

> Solipsism:
>
> (Lat. solus, alone + ipse, self)
>
> (a) *Methodological*: The epistemological doctrine which considers the individual self and its states the only possible or legitimate starting point for philosophical construction. See *Cogito, ergo sum*; *Ego-centric predicament*; *Subjectivism*.
>
> (b) *Metaphysical*: Subvariety of idealism, which maintains that the individual self of the solipsistic philosopher is the whole of reality and that the external world and other persons are representations of that self having no independent existence. (Woods 1960)

Wood's entry puts us in mind of the Cartesian lineage of modern philosophy's problematic of solipsism: it cross-references *Cogito, ergo sum*; *Ego-centric predicament*; and *Subjectivism*. (We shall return to these related issues.) Solipsism, then, comes in many forms, but in its most extreme, metaphysical or ontological form, it asserts that only I exist—in the context of music theory, the listening or theorizing "I." Its complementary negative motion presents the skeptical argument that doubts the existence of others or other minds. Despite the

definition here given, we shall see that methodological solipsism as understood in the lineage of Carnap's *Aufbau* makes no claims to necessity, merely to methodological expediency, and additionally makes no ontological nor epistemological claims, but uses a solipsistic basis—the foundation of the experiencing or remembering "I"—as the basis for the construction of its system, musical or otherwise. Woods defines methodological solipsism here as an epistemological position, which asserts that I can only know the contents of my own sense impressions. This shades into metaphysical solipsism because if you do exist, you cannot share these sense impressions, and I cannot share yours (again, if you do exist).

Solipsism may seem a non-issue, a position that no one truly holds, an argument from extremes, or a chimera. But we will discover that certain members of Princeton Theory do indeed hold to this position and yet attempt to exorcise it; that Princeton Theory accuses its own practitioners of sliding toward it; that four important influences on Princeton Theory—Russell, Wittgenstein, Carnap and Goodman—assumed or problematized it; that although solipsism appears as a problematic during Princeton Theory's high-modernist phase, it becomes especially pronounced after the Turn; and that indeed, not only has Princeton Theory been accused of it, but *all* formalism has met this charge. I argue that its critics have been more correct than they realize, but not because musical formalism or Princeton Theory somehow simply "is" solipsistic, but rather because the solipsistic problematic hangs over Princeton Theory's discourses, eventually representing the most extreme form of modernist alienation. But further, I show that if, for example, Boretz's *Meta-Variations* can be regarded as solipsistic, then its creation of the external (musical) world is a

necessity—a need arises to create the external world to prove (to himself) that he is not all that exists, musically.

This chapter seeks to accomplish a number of goals: to show that solipsism is an issue not just for the critics of Princeton Theory, but also for the Princeton Theorists themselves. I argue this by unpacking the problematic of solipsism primarily in the writings of Russell, Wittgenstein, the Carnap of the *Aufbau* and Nelson Goodman's *Structure of Appearance*, showing how these writings served as important historical precedents for substantial music-theoretical writings by the Princeton Theorists Winham, Boretz, and Rahn. Further, I trace the problematic of solipsism from Descartes, show its revival in Husserl, and situate the post-Turn writings of Princeton Theory—particularly the later Boretz—against this phenomenological solipsism. I show how Boretz's later radical relativism entails solipsism. I discuss a subtype of solipsism, the "solipsism of the present moment," which in one sense temporalizes solipsism. And lastly, I discuss a Babbitt quote which accuses Marion Guck (who classifies her own work as sitting uneasily within the lineage of Babbitt and Princeton Theory [see Guck 1997, 53 and Guck 2012, 101]) of sliding close to a "private language" (Babbitt 1997, 135), showing it to be a problematic and far from obvious accusation, because the argument against the possibility of a private language, so named, was carried out by Wittgenstein in his *Philosophical Investigations*. Chapter Five, then, investigates the ethical implications of a solipsistic position, among other ethical problematics surrounding Princeton Theory.

As stated, at times solipsism represents the furthest extension of modernist alienation, which I take to be the insight provoked by skeptics such as

Taruskin, Kerman, and McClary, whose positions appear fairly widely held within musical academia generally. But there exists a certain naiveté to the critics' positions, and normal music theory in general, when both assume experiences *are* (simply, mechanically, grossly) sharable: this is the insight provoked by Princeton Theory. The problematization of the publicness of experience should motivate us to think more deeply about our assumptions and goals. This is not the same as saying some music-theoretical or programmatic entity is "not hearable." It is saying *I* can hear it, but I have no access to whether *you* can hear it, even if you behave as if, say that, you do. Solipsism within Princeton Theory puts pressure on musical discourses of all types, because the critics of Princeton Theory forget that solipsism was problematic both after the Turn, when it engaged phenomenology and first-person reports of experiences, and before, during its high-modernist, system-building, logical positivist, scientistic moment.

1. Solipsism and Communication

The critics of Princeton Theory accuse it of solipsism: either individual members or *in toto*—solipsistic in their beliefs, or solipsists by implication of a sometimes subjectivist stance vis-à-vis analysis, invoking sensation language. Furthermore, Gary Tomlinson, in a classic of the New Musicology, argues that musical formalism in general, and by extension Princeton Theory in particular, is solipsistic: "[Lawrence Kramer] offers as the goal of musicology the continuance of the 'dialogue of listening,' but he gives little hint as to how we might begin to

reconceive this dialogue in postmodern terms. Indeed, from his example we could only guess that his 'dialogue' comes closer to modernist solipsism than to true conversation—to a ventriloquist's monologue in which the critic reacts to the music by throwing his/her voice into the body of the faintly imagined composer/other."[1] For "modernist solipsism" we can read modernist, formalist and epistemological solipsism, for Tomlinson is here accusing Kramer of falling back on precisely such a formalism, a formalism born, Tomlinson argues, of the bifurcation between language and music, enabling either the description of musical contexts or texts themselves, assuming the transcendent power of the authorial voice of the composer, reinscribing an aesthetics of mastery and colonizing, terrorizing power relations (Ibid., 18–19, 21, and 23). Formalism, criticism, description, for Tomlinson, if carried out in modernist guise, create, not simply the tendency toward solipsism, but solipsism itself. Not simply subjectivity or subject-formation, but a discourse of subject-formation at the expense of community building, incapable of communication, of being shared: monologic, imperial.

Kevin Korsyn brings all of this closer to home, pointing to Princeton Theory after the Turn: "Unconventional genres can also tend toward monologism. *Perspectives of New Music*, for example, has published a number of experiments with unconventional modes of music analysis, some of them in the form of free verse, which seem hermetic and solipsistic" (2003, 185). "Seem" is an important caveat, but the entire sentiment figures as a kind of warning: Korsyn himself pushes and advocates pushing discourse far, but not too far.

[1] Tomlinson (1993, 20–21); for a rehearsal of Tomlinson's critique, see Horton 2001.

Hermeticism and monologism here coincide with solipsism. It must be said that Korsyn projects an ambivalence here, because more generally he is advocating and himself performing discursive dialogism, so *Perspectives of New Music* would seem to be precisely the model within recent music theory he would like to emulate. Indeed, he analyzes approvingly Lewin ([1986] 2006), but as discussed in Chapter Two, I read that article as Lewin's own "freak out" piece, i.e., his own Turn. Korsyn is correct, in my view, to suggest the *tendency* in Princeton Theory toward monologism, but we might suggest a dialectical counter-tendency toward the dialogic.

In their critique of Princeton Theory generally and Boretz's *Meta-Variations* particularly, Brown and Dempster (1989, 76) historicize the problematic of solipsism as a necessary component of phenomenalistic systems: "Phenomenalism carries with it the threat of solipsism and the problems Wittgenstein and others have associated with so-called 'private languages.'" Again, as discussed in Chapter Three, phenomenalistic systems construct the world on the basis of experience. The "threat" of solipsism is that they might not be able to get out of the single subject's experience. Rahn (1974), at the least, was aware of this possibility, anticipated it, and even argued against it. Additionally, as stated, Babbitt (1997) accuses Guck (1997) of creating something close to a private language by using metaphors to discuss music. We shall discuss these aspects of the problematic in more detail later in this chapter.

In responding to a loosely phenomenological article by Joseph Dubiel (2004), Rose Rosengard Subotnik asks, "when Dubiel advocates, for instance, that 'the main value of [one's] analyses… be something like responsiveness,' what warranty can he offer that the scholar's responses will have a claim on anyone

else? Is his casual afterthought, that 'a related value is frankness,' intended to provide such a warranty? Is frankness sufficiently rigorous to prevent the collapse of the individual into the solipsistic?" (2004, 291) Although Dubiel's hearings are concerned or begin with introspection, I would argue that if readers can hear or even approach, imagine, hearing the "whats" he describes, then we share at least that much. Solipsism is an issue not of agreement, which Subotnik implies, but rather of shared accessibility, a more fundamental level. Hence solipsism is not an actual argument or position here, but rather voices Subotnik's own discomfort with the all-too-personal, of actually having to comment on what she hears: the legalistic, contractual language of the repeated "warranty" giving this away, as an escape to formality. I want to emphasize my admiration for Subotnik's work, but also mark its limits, and ask: when or by what means does the individual avoid the collapse into the solipsistic? What would an alternative discourse that still respects the individuality of the musical listener look (better, sound) like? In lieu of an answer, the fear of solipsism remains, and in each of these cases (Tomlinson, Korsyn, Brown and Dempster and Subotnik; both before and after the Turn) it appears to be a metaphysical solipsism that represents such a threat to communality as represented by (presumably, plainly public) discourse.

Randall seems most guilty (if we conceive of it thus) of this charge. In fact, he seems to violate frankly public discourse intentionally, as a kind of stylized warning: the impenetrability of the surface of his texts acts as a kind of armor, indemnifying his individuality. Just when you think you have pinned him down, his meanings, he gives you the slip. At play here is a composerly withholding of meaning: precisely the anti-historical musicology stance.

Meaning is far too personal, too interior, to be brought into discursive space, light. He would seem the most hermetic, if not solipsistic, of these composers/theorists, yet even here we can reconstruct meaning. Perhaps, it is not the texts which defy communication, but the reader's interaction with Randall's texts. Indeed, communication still exists. Randall, in the "Prefatory Note" which begins the mammoth two-volume collection of his and Boretz's writings from 1960 to 2003, *Being About Music*, figures communication as problematic, *not* along the usual lines of, will you understand the signal I have sent out?, but rather, once filtered through you and repeated back to me, will I understand the signal I had sent out? (Randall 2003, 1) The fear of this inability, (and ability is a kind of catchword that needs to be interrogated, yet seems appropriate) raises the very real question: why, then, write (in either a linguistic or musical sense) at all? Why attempt to communicate? Boretz is more explicit and seemingly solipsistic. Others may exist, but they are secondary to the music-experiencing self: "The core problem of intersubjectivity is: how can I know my own experience? What means of mental exertion or interior formulation can I invent to acquire compositional and performative access to what I have already undergone, but not, as I wish it, fully experienced? Communication with others is a fringe benefit" ([1992] 2003b, 312). It seems, then, for the sake of one's self that one communicates, but further, "Thinking in music, the creative-relative do-it-yourself ontology-making ascribing activity is fully liberated, and fully determinate, if terminally occluded from the verbal-cognitive kind of intersubjectivity by its untranslatable, unparaphrasable selfhood" (Boretz [1993] 2003, 351). Communication—translating and paraphrasing in the hope of

intersubjectivity—seems doomed. In lieu of communication, solipsism seems the fallback position.

This said, Randall would probably argue that his means of communication are just that: means of communication, for the benefit of all parties involved. They take on radically altered and non-conformist, non-academic styles, but so much the better, more appropriate, for communicating the lived qualities of musical motion, for example. To return to our earlier suggestion of a monologic/dialogic pairing in Princeton Theory after the Turn, Boretz's ([1982] 2003) *Talk: If I Am a Musical Thinker* seems profoundly monologic: it features Rorschach inkblots; but the last section of Randall's ([1970] 1995) *Compose Yourself*, for instance, is profoundly dialogic: so much so that it becomes difficult if not impossible to separate the multiple voices, multiple subjectivities presented. Indeed, we can detect a tension between communication and solipsism, self and other, for while discussing his composing after the Turn, Randall says that, "with MIDI I'm working directly on sound like a sculptor and I guess it has that nice solipsistic feel to it" (Randall 2011, disc 3, c. 42:50). But, he continues: "I think my satisfaction with it goes back to something which I've always believed and said, which is, okay, I'm simply… concentrating on what I want this to be and how I want this to sound. I'm not concerned that this is or isn't of some fashion or some style. I'm not concerned with that…. And my justification for that was not that I don't give a shit about anybody else; that's not the point, the point is I have no reason to think I'm unique" (Ibid.). Randall here articulates a desire for solipsism as a space apart, a safe space for self and composing, and listening, removed from fashion, style, and triviality—surface change. As we shall discuss in Chapter Five, there is an ethical consideration

here for Randall, because the other option for the composer—projecting herself out into the world, as "somethin' special"—seems blatantly unethical, destructive both to music and the self.

Earlier, however, there was a time when communication and communality seemed not only possible, but important, if begrudgingly. Babbitt: "The composer who insists that he is concerned only with writing music and not with talking about it may once have been, may still be, a commendable—even enviable—figure, but once he presumes to speak or take pen in hand in order to describe, inform, evaluate, reward, or teach, he cannot presume to claim exemption—on medical or vocational grounds—from the requirements of cognitive communication" ([1965] 2003, 192). *Meta-Variations* is all about communication, music as communication: "Anyone who does make the musical data-field his pasture, but still maintains a view of musical 'being' as something other than a form of cognitive communication is actually not in a position to carry out such a program cognitively."[2] Cognitivity, in this reading of *Meta-Variations*, then, takes on a secondary importance to the problematic of communication.

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[2] Boretz (1969, 22). At issue here is the notion of cognition or the cognitive. *Erkenntnis* (cognition/knowledge) is the German that the logical positivists and others are using. In the epigraph that appears before Chapter Three, Kant uses *Erkenntnis* (from the *Critique of Pure Reason*). In 1925 Mortiz Schlick published *Allgemeine Erkenntnislehre* (translated as Schlick [1925] 1985). In the 1930s the Vienna Circle starting publishing a journal called *Erkenntnis*. In brief, for the logical positivists, that which is verifiable through sense experience, or reducible to observational terms, is cognitive, knowable, so that the goal of our projects, musical or otherwise, is an intersubjective *Erkenntnis*. For further discussion, see Hempel ([1950] 1965), and Scheffler (1963, 127–222). It would be interesting to read the latter two against Blasius (1997, 1–13), which discusses Winham on the problem of musical significance, and to which we shall return.

For Fromm, the rationale for the founding of *Perspectives of New Music* had been precisely its ability to enable communication, communication between a select but wide group of people, with a very specific, very general end: "We hope that by offering composers the opportunity to discuss issues vital to them, and by encouraging a mutual interchange of ideas between composers, performers, and listeners, *Perspectives of New Music* will succeed in bringing music closer to the center of contemporary culture" (Fromm 1962, 2). This is very far removed from Babbitt's ([1958] 2003) vision. Even for Boretz and Berger, *Perspectives of New Music* was, "a forum in which to evolve linguistic modes for communication" (Berger and Boretz 1962, 5). It is as if once communication, communication and therefore communality, was firmly established, by the early 1970's, we find a dialectical motion away—without, seemingly, achieving any closure.

2. *Logical Positivism, Methodological Solipsism, and the Self*

We can approach the problematic of solipsism from another angle, however, and that is from logical positivism. A main tenet of logical positivism in what I have called the Received View, was that the knowledge science generates should be or potentially be grounded in or tested against experience: experientially verified by someone *having* the experience. This is the famous criterion of verifiability, as discussed in Chapter Three. I quote A. J. Ayer at length, because by the time he was writing (1959) the issue of solipsism as it relates to verifiability had seemed to be settled:

> The prevailing view [among the logical positivists] was that [elementary] statements referred to the subject's introspective or sensory experiences…. For in the last resort it is only through someone's having an experience that any statement is verified…. Though physical objects might be publically accessible, sense-data were taken to be private. There could be no question of our literally sharing one another's sense data, any more than we can literally share one another's thoughts or images or feelings. The result was that the truth of an elementary statement could be directly checked only by the person to whose experience it referred…. If each of us is bound to interpret any statement as being ultimately a description of his own private experience, it is hard to see how we can ever communicate at all. Even to speak of "each one of us" is to beg a question; for it would seem that on this view the supposition that other people exist can have no meaning for me unless I construe it as a hypothesis about my own observations of them, that is, about the course of my own actual or possible experiences. It was maintained by Carnap and others that the solipsism which seemed to be involved in this position was only methodological; but this was little more than an avowal of the purity of their intentions. It did nothing to mitigate the objections to their theory. (1959, 17–18)

In his earlier popularization of the Vienna Circle, *Language, Truth, and Logic*, Ayer ([1936] 1952) went to great lengths to argue that the principle of verification does not entail solipsism, this despite his later problematization of the privateness of experience here. (We shall return to the problem of other people later in this section and in Chapter Five.)

The Vienna Circle of logical positivists spent months studying Wittgenstein's *Tractatus Logico-Philosophicus*. "Logical positivism combined Wittgenstein's emphasis on an explicit test of meaningfulness with Russell's logical techniques and his emphasis on sense experience and observation" (Soames 2003a, 259). Furthermore, the *Tractatus* includes a famous, if perplexing and seemingly mystical, account of solipsism, which I would like to outline here. David Pears (1987, 5) traces the *Tractatus*' solipsism to the opening axiom and extension of Schopenhauer's *The World as Will and Representation*:

> "The world is my representation": this is a truth valid with reference to every living and knowing being, although man alone can bring it into reflective, abstract consciousness. If he really does so, philosophical discernment has dawned on him. It then becomes clear and certain to him that he does not know a sun and an earth, but only an eye that sees a sun, a hand that feels an earth; that the world around him is there only as representation, in other words, only in reference to another thing, namely that which represents, and this is himself. (Schopenhauer [1818] 1969, §1)

Cartesian and Kantian filiations apparent, the notion expressed is that I do not have access to things in themselves, rather only my representations of them, and, since the *that out there* is only my representation, I only have access to my own self (and its representations, the world). Wittgenstein picks up this theme but alters it to accord with the notion that the "I" of the solipsist is not *in* the world: "The self of solipsism shrinks to a point without extension, and there remains the reality co-ordinated with it" ([1921] 1974, §5.64). Wittgenstein next nearly quotes Schopenhauer: "What brings the self into philosophy is the fact that 'the world is my world'" (Ibid., §5.641). Earlier, Wittgenstein declared that, "the world is *my* world" (Ibid., §5.62). Indeed, the entire set of propositions beginning with §5.6 read as an elaboration upon Schopenhauer's insight: "*The limits of my language* mean the limits of my world." Pears (1987, 158) argues that unlike earlier treatments of the problematic of solipsism, Wittgenstein is less concerned with the solipsist's experiences than with the purported identity or ego behind those experiences, denying the knowability or existence of such an ego.[3] We shall treat

[3] As with seemingly everything Wittgenstein, disagreement exists as to whether he affirms or denies the validity of solipsism. I believe he affirms it. Here is one discussion of the matter: "In *The False Prison* volume I (1987) David Pears (to simplify drastically) regards solipsism as a theory refuted in the early work by showing that the supposed subject does not exist and rendered totally harmless in later discussion by showing that the supposed private objects of such a subject cannot exist either. One difficulty with this account is that in the earlier work Wittgenstein does not refute but affirms solipsism" (McGuinness 2002, 131).

the same theme in discussing Carnap's denial of the necessity of the self at the earliest stages of his (re)construction of the world.

We turn, then, to Carnap's *Aufbau* because it served as the *locus classicus* of the early movement of logical positivists and was the text most readily serving as a model for the construction of an axiomatic music-theoretical system. As mentioned by Ayer, in this text solipsism was announced as a methodological position, following from the phenomenalism of Carnap's construction. Carnap ([1928] 2003 §64) explicitly borrows the notion of methodological solipsism from Hans Driesch, a quotation from whom will aid our understanding and provide historical context for this admittedly difficult notion. "The totality of immediate objects, then, are *my* objects, and their order is *my* order…. I have *not* said: 'the world of my objects, both immediate and mediate or natural, is only my world.' But I have said: 'it is *my* world *in any case*,' or, in other words: 'this it is that I know: it is *my* world'" ([1905] 1914, 232–33, emphasis original). Driesch here presents what he calls a critical method (Ibid., 233), because the method only assumes that the objects of the world are *my own* objects, and withholds judgment as to the status of these objects for others, for you. The difference with Carnap is that Driesch assumes a subject as foundation from which others and the world are to be constructed, while Carnap does not.

Unlike Driesch and Wood's definition quoted earlier (Woods 1960), it is precisely Carnap's point that methodological solipsism does not necessitate the experience of the individual subject, but rather takes that solipsistic standpoint as the *methodological* start for the system:

> The autopsychological basis [the psychological occurrences within the individual self] is also called *solipsistic*. We do not thereby subscribe to the view that only one subject and its experiences are real, while the other subjects are nonreal [*metaphysical* solipsism]…. Since the choice of an autopsychological basis amounts merely to an application of the form and method of solipsism, but not to an acknowledgement of its central thesis, we may describe our position as *methodological solipsism*. (Carnap [1928] 2003, §64, emphasis original)

Carnap constitutes the "I" at a later level of the system (Ibid., §163), following from his commitment to a solely methodological solipsism. As he says,

> The expressions "autopsychological basis" and "methodological solipsism" are not to be interpreted as if we wanted to separate, to begin with, the "*ipse*", or the "self", ["Ich"] from the other subjects, or as if we wanted to single out one of the empirical subjects and declare it to be the epistemological subject. At the outset, we can speak neither of other subjects nor the self…. In our system form, the basic elements are to be called experiences of the self *after* the construction has been carried out…. *Egocentricity is not an original property of the basic elements*, of the given. (Ibid., §65, emphasis original)

This characterization forms a crucial difference with Husserl's phenomenology, which starts from the assumption of the self as experiencer of its world. (Carnap makes exactly this point at Ibid. We shall return to Husserl shortly.) But in the *Aufbau*'s constitutional system, the given in experience at the first levels of the system has yet to be experienced by some Cartesian subject as the seat of awareness and knowledge. That must be constituted at a later level. As Nelson Goodman says in the most in-depth exposition and critique of the *Aufbau*, "Carnap has given notice that his system would be phenomenalistic and thus in one sense solipsistic; but he has pointed out that strictly the ground elements (i.e., the basic units) are subjectless, since such terms as 'subject,' 'subjective,' and 'objective' have to be defined at a later stage of the system" ([1951] 1966, 154).

The system of the *Aufbau* begins simply with the basic relation of remembered similarity: "*x* and *y* are elementary experiences, where a recollected representation of *x* is compared with *y* and found to be part similar to it."[4] But whose recollected representation has yet to be constructed: memory without a subject.[5] Ayer summarizes thus:

> The use of the word "methodological" was somewhat disingenuous: it was intended to forestall discussion of the epistemological problems which the choice of a solipsistic basis might be thought to raise. The basis was solipsistic inasmuch as Carnap, following Mach, James and Russell, after his own fashion, took as his starting-point the series of elements each constituting the whole of a person's current experiences at a given moment, and attempted to show how the entire set of concepts needed to describe the world could be constructed stage by stage, by the application of Russell's logic, on the basis of the single empirical relation of remembered similarity.[6]

The denial of the self historically originates in a passage by David Hume ([1737–1740] 2000, §1.4.6, emphasis original) excerpted here:

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[4] Carnap ([1928] 2003, §108; see also §78). Carnap defines "part similarity" as, "the approximate agreement of two elementary experiences relative to some characteristic of two constituents." Further, "two elementary experiences *x* and *y* are called 'part similar' if and only if an experience constituent (e.g., sensation) *a* of *x* and an experience constituent *b* of *y* agree, either approximately or completely, in their characteristics" (Ibid., §77).

[5] Carnap even quotes Nietzsche's *The Will to Power* on the linguistic basis of the notion of a self, denying its necessity: "It is merely a formulation of our grammatical habits that there must always be something that thinks when there is thinking and that there must always be a doer when there is a deed" (Nietzsche 1968, §276 quoted in Carnap [1928] 2003, §65; see also, §163).

[6] (1982, 126). Recall from Chapter Three that the term for this project is "foundationalism."

> There are some philosophers, who imagine we are every moment intimately conscious of what we call our SELF; that we feel its existence and its continuance in existence; and are certain, beyond the evidence of a demonstration, both of its perfect identity and simplicity…. Unluckily all these positive assertions are contrary to that very experience, which is pleaded for them, nor have we any idea of *self*, after the manner it is here explain'd. For from what impression cou'd this idea be deriv'd? This question 'tis impossible to answer without a manifest contradiction and absurdity; and yet 'tis a question, which must be necessarily answer'd, if we wou'd have the idea of self pass for clear and intelligible…. If any impression gives rise to the idea of self, that impression must continue invariably the same, thro' the whole course of our lives; since self is suppos'd to exist after that manner. But there is no impression constant and invariable. Pain and pleasure, grief and joy, passions and sensations succeed each other, and never all exist at the same time. It cannot, therefore, be from any of these impressions, or from any other, that the idea of self is deriv'd; and consequently there is no such idea…. For my part, when I enter most intimately into what I call *myself*, I always stumble on some particular perception or other, of heat or cold, light or shade, love or hatred, pain or pleasure. I never can catch *myself* at any time without a perception, and never can observe any thing but the perception…. I may venture to affirm of the rest of mankind, that they are nothing but a bundle or collection of different perceptions, which succeed each other with an inconceivable rapidity, and are in a perpetual flux and movement.

This said, how could Carnap could base his system on any form of solipsism—which asserts a self—and yet construct the self at a later stage of the system? The way out of this contradiction is to assert that the self can be identified with its sensations, so that while the methodological solipsist lacks a "self" as a unified seat of experience, outside of its experiences, the solipsist identifies itself with the experience of, in Carnap's case, remembered similarity: "*The 'self' is the class of elementary experiences*" (Carnap [1928] 2003 §163, emphasis original). It is not, that is, *prior* to those experiences, but constituted *during* those experiences, identified with those experiences, which is what a Humean solipsist would argue, as per above. Carnap's system is solipsistic, and as we shall discuss, other people are not constructed until much later.

Until Chalmers (2012),[7] Goodman ([1951] 1966) was the most thoroughgoing attempt to reconstruct the world in the manner of the *Aufbau*.[8] Furthermore, Goodman's work was a direct precedent to Boretz's *Meta-Variations*: Boretz quotes from it liberally, although not blindly (specifically on the issue of classes). Also presenting a phenomenalistic basis, Goodman touches on the issue of solipsism:

> Speaking from outside a phenomenalistic system, [i.e., from the perspective of a physicalistic system] one may describe its basis as solipsistic, may say that its basic units are comprised within a single stream of experience. But speaking from the point of view of the system itself, this is an anachronism. For the basic units of such a system are not taken as belonging to a subject and representing an object. They are taken as the elements in terms of which must be construed whatever objects, subjects, streams of experience, or other entities the system talks about at all…. The constructions of a phenomenalistic system are discussed and tested quite as intersubjectively as those of any other system. (Goodman [1951] 1966, 141–42)

The crucial point for Carnap's constructional system in the *Aufbau* is that we must construct the external world, other people, as well as their worlds, others and their objects of experience (their sense impressions or sense data), *within our own* systems: "From the indicated way of constructing the 'world of M,' it follows that, between this world and 'my world,' there exists a certain analogy; more precisely, the analogy holds between the constructional system as a whole (S) and the 'constructional system of M' (S_M). It must be remembered, however,

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[7] Which ignores the issue of solipsism, and indeed seems more concerned with problems of self-doubt; see pp. 171–76.

[8] Everything old is new again. I do not think this is at all random; indeed, the utopian dimensions are striking: Carnap reconstructs the world post-WWI; Goodman, post-WWII; Boretz, during the Vietnam War; and Chalmers, in the post-9/11 and Great Recession world.

that S_M is only a partial system within S; the world of M is constructed within my world; it is not to be considered as formed by M, but as formed by me for M" (Carnap [1928] 2003, §224). You are simply a construction within my world. If I construct you within my world, there appears to be no external principle or experience that could confirm your existence outside of my world. As stated, Ayer ([1946] 1952, 128–33) goes to great pains to establish that methodological solipsism does not entail an epistemological solipsism, nevertheless, here it is in the *Aufbau*. The problem is that although Carnap provides a construction of other people (Carnap [1928] 2003, §137 and §140), if he does not succeed, he falls back into solipsism. As Ayer said, quoted earlier: "It was maintained by Carnap and others that the solipsism which seemed to be involved in this position was only methodological; but this was little more than an avowal of the purity of their intentions. It did nothing to mitigate the objections to their theory" (1959, 17–8).

The problem of getting out of myself may thus remain, but it may seem less pressing for music theory. This depends on the foundations for the music-theoretical system and its goals. As to foundations: if the music-theoretical system assumes, say, Carnap or Goodman's system as foundation of the world, then the music-theoretical system will be a branch within that larger system, thus the musical component will shed responsibility for constructing the non-musical world. As to goals, it is less than obvious that it is the responsibility of music-theoretical systems to construct other people's listenings, let alone other *people*. The assumption by music theorists is or was usually—especially for the Princeton Theorists—that each of us is responsible for constructing our own systems, for ourselves. One significance of this position is that it denaturalizes

music theory, resting responsibility for the musical world upon each composer/theorist. These issues we shall discuss in greater detail in Chapter Five.

Before then, I would like ask how one music-theoretical system treats the issue of solipsism, experience, and other people. Does Godfrey Wiham's unfinished project construct a self, assume a self, or withhold comment? In Blasius' reading of Winham's project, music theory's, "subject must be the musical phenomenon as distinguished not only from notations but also from both physical sound and sense-data…. In other words, the subject of analysis [or the constructional system] could be the tone, a phenomenal event, but could not be the sound wave, a physical event, or, in contrast, some subjective observational report" (1997, 15). These statements define Winham's music-theoretical system as phenomenalist, but have yet to assume a subject. (For our purposes it would have been clearer if Blasius has used "object of analysis" instead of "subject of analysis.") When Winham then moves from the meta-theoretical level to the theoretical level of constructing a musical system, his first primitive description is a relation, "lower in pitch":

$$\text{A1. } (L^2 \subset L) \bullet (L \subset \sim I)$$

Which Blasius interprets as: "If there is an x which is lower than a y, there is a z which is lower than both x and y; and if there is an x lower than y, then y cannot be lower than x" (Ibid., 19). Where, here, is the subject? This axiomatic construction of music seems not to have constructed the subject yet (which

would have provided an observational report), nor the world (of which the musical work and its basic units are a member) (see also Ibid., 21). Rather, it constructs the foundations of music without yet constructing an experiencer—a subject, or self—of that phenomenon, thus before the question of solipsism. Music exists, without a perceiver, for the sake of the systematic construction.

3. Rahn's "Epistemological Problem" of Intersubjectivity, Solipsism, and Objectivity

Within Princeton Theory, Winham's system is not unique in this regard: Randall's "Tonality" (Randall 1963; see also Blasius 1997, 23–6) builds its system without discussing meta-theoretical issues such as solipsism, as does Kassler (1967). Even Babbitt, in his dissertation, avoids the problem of who does the experiencing, such as might entail solipsism. Babbitt:

> All historical and empirico-analytic considerations have been forgone. The former, because any examination based on such considerations must either degenerate into a formal recounting of facts easily obtainable from other sources, or involve one in complicated questions of stylistic sources and esthetics in general, which is not the province of this paper; the latter, because the approach dominated by this point of view already makes up the greatest part of the literature of the [twelve-tone] system. ([1946] 1992, iv)

Babbitt's deductive theory of the twelve-tone system stands anterior to experience: empiricism or music analysis. It assumes no subject, but also no experience. Perhaps what makes Boretz's *Meta-Variations* unique is that it *does* discuss these issues (as we discussed during Chapter Three and will discuss later in this chapter), as does John Rahn (1974, 5–11) in his dissertation. Rahn in fact

pushes the issues we have been discussing by arguing around an "epistemological problem" (Ibid., 5), which is the problem of the intersubjectivity of experience, with the assertion of solipsism as one possible answer.

Earlier, having defined music theory as the study of musical objects, Rahn specifies that by "object" he means a *phenomenal* object—"sounds-as-perceived" and their interrelated qualities —not a physical one: the language of phenomenalism versus physicalism, respectively, familiar from Chapter Three (Ibid., 1 and 2). He continues: phenomenalism, "immediately raises difficulties, for it is in the realm of the physical that objects are most clearly defined intersubjectively, especially for any kind of science."[9] Indeed, while Rahn seems to bypass the problematic of solipsism altogether by assuming a subject but framing the epistemological problem as one of intersubjectivity, as we have discussed, for any phenomenalistic system the prior, more foundational question is that of solipsism and how the sole self constructs other minds, people, and their experiences.

Given the long historical context of the solipsism of such private experiences (as discussed in the preceding section of this chapter), Rahn acknowledges the problematic of solipsism but then quickly passes it by: "the private nature of phenomenal objects" immediately raises the question of whether only the private I exists. Solipsism and the problematic of intersubjectivity are thus intimately connected. Wittgenstein, in the following quotation, unpacks the relations, which become more pressing if we substitute sonic acts and objects for his visual ones while reading:

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[9] Ibid. Recall Brown and Dempster's criticism regarding phenomenalistic systems mentioned earlier, which Rahn here anticipates by twenty-five years.

> The phrase "only I really see" is closely connected with the idea expressed in the assertion "we never know what the other man really sees when he looks at a thing" or this, "we can never know whether he calls the same thing 'blue' which we call 'blue.'" In fact we might argue: "I can never know what he sees or that he sees at all, for all I have is signs of various sorts which he gives me; therefore it is no unnecessary hypothesis altogether to say that he sees; what seeing is I only know from seeing myself; I have only learnt the word 'seeing' to mean what *I* do…."
>
> The difficulty which we express by saying "I can't know what he sees when he (truthfully) says that he sees a blue patch" arises from the idea that "knowing what he sees" means: "seeing that which he also sees"; not, however, in the sense in which we do so when we both have the same object before our eyes: but in the sense in which the object seen would be an object, say, in his head, or in *him*. The idea is that the same object may be before his eyes and mine, but that I can't stick my head into his (or my mind into his, which comes to the same) so that the *real* and *immediate* object of his vision becomes the real and immediate object of my vision too. By "I don't know what he sees" we really mean "I don't know what he looks at," where "what he looks at" is hidden and he can't show it to me; it is *before his mind's eye*. ([1933–35] 1958, 60–61, emphasis original)

Objectivity may exist, but intersubjectivity is the problem. Indeed, Rahn himself takes up Wittgenstein's question, if not its extension:

> We shall explore the following epistemological problem: if two listeners (called "A" and "B") of comparable physical capacities are in the same auditory situation, e.g. sitting side by side in a concert hall listening to Beethoven's Fifth Symphony, to what extent and in what ways are they hearing the same music? This breaks down into two sub-questions: 1) are they hearing "equivalent" sets of "phenomenal sounds," that is do they use similar or identical sets of "sounds" to refer to their possibly disparate experiences, and 2) given identical sets of "sounds," are A and B hearing the referents of those sounds as being associated and related in comparable, similar, or identical constructs? (1974, 5)

Rahn asks if, given the same conditions, listeners A and B hear the same music, inquiring as to the status of equivalence, identity, and, earlier, isomorphism as descriptions of the listeners' referent—eventually inquiring into the status of the musical work itself. In a footnote, Rahn glosses the word "equivalent" thus: "'Equivalent' to within our common theory of sounds…. The private nature of

phenomenal objects makes it necessary to talk in terms of their intersubjective 'equivalence' rather than in terms of an identity which, even if it existed, would be incommunicable" (Ibid., n 1). For Rahn, "equivalence" does not ultimately get us out of the problem of the intersubjectivity of experience—that one can never know whether or not when she hears Beethoven's Fifth Symphony her friend sitting next to her hears the same Beethoven's Fifth Symphony—in a sense suggesting an answer to his question in the footnote before he has answered it in the body of his text. Before discussing Rahn's answer and the issues of identity and isomorphism, I would like to develop the possibility that equivalence most accurately describes his referent. That is, I would like to discuss Rahn's possibility that the intersubjective relation should be characterized as one of equivalence rather than identity, while keeping in mind that he will ultimately take it back later. I would like to do so because it promises one solution to the problem of solipsism. If we can hear the same music, if we can communicate, then not only I exist, musically or otherwise.

What does Rahn mean, then, by "equivalence?" Let us recall that he refers to equivalent sets of phenomenal sounds. Thinking of sounds as being related sets amenable to mathematical analysis and logical representation would have been quite natural for Rahn and Princeton Theory in its high-modernist moment, and yet it is a striking move.[10] In mathematical set theory, as developed by Richard Dedekind, Georg Cantor, Ernst Zermelo and Abraham Fraenkel, "a

[10] See Schuijer (2008, 84–129) for extended discussion of equivalence within musical set theory, beginning with Babbitt ([1946] 1992, 8–9) and extending to work by Forte, Lewin, John Clough, Randall, other work by Rahn, Fritz Heinrich Klein and Robert Morris.

relation which is reflexive, symmetric, and transitive in a set is an *equivalence relation* on that set."[11] Or, in logical symbolism:

> *R is an equivalence relation* ↔ *R is a relation & R is reflexive, symmetric, and transitive.* (Suppes [1960] 1972, 80)

We can read this as: R is an equivalence relation if and only if R is a relation and R is reflexive, symmetric, and transitive. This definition had been in place at least since the 1910's, and indeed, in Carnap's *Aufbau* he defines equivalence in the same manner.[12]

What, then, are reflexive, symmetric, and transitive relations? Suppes ([1960] 1972, 69) defines them as follows:

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[11] Suppes ([1960] 1972, 80, emphasis original). I use this text because Rahn refers to it elsewhere in his dissertation.

[12] ([1928] 2003, §73). Later, Carnap ([1954] 1958, 120) defines an equivalence relation in the same manner (as reflexive, symmetric, and transitive), but provides a different formalization. He gives examples of reflexive such as contemporary, equally-long, smaller-or-equal. "Parallel is a symmetric relation. Examples of other symmetric relations are similar, contemporary, sibling" (Ibid., 119). And examples of transitive relations include parallel, equal, less, less-or-equal, ancestor (Ibid.; See also Suppes 1957, 208–28 which provides other formal definitions for these basic definitions and many practical examples). Blasius paraphrases thus: "A relation is symmetrical if it is identical with its converse: the relation 'contemporaneous' is symmetrical…. Two events that within their field are always fulfilled are reflexive: 'contemporaneous' is reflexive…. A relation is transitive if it holds for the next member of a class but one: 'ancestor' is transitive (1997, 18). Interestingly, Blasius paraphrases Carnap here because in the Winham archive, so Blasius argues, these three relations taken together provide Winham with "the ability to specify *a priori* what constitutes a significant relation, and hence what constitutes (at this level) 'musical structure'" (Ibid.). Music-theoretical or analytical significance is here defined as equivalence between two musical sets; significance likewise defines the notion of musical structure, therefore, thinking transitively, equivalence defines musical structure.

Definition 10. R *is reflexive in* $A \leftrightarrow (\forall x)\,(x \in A \rightarrow x\ R\ x)$.

Which I read as:

> R is reflexive in A if and only if for every x if there is an x that is an element of A then x,x is an element of R.

Definition 12. R *is symmetric in* $A \leftrightarrow (\forall x)\,(\forall y)\,(x,y \in A\ \&\ x\ R\ y \rightarrow y\ R\ x)$.

Which I read as:

> R is symmetric in A if and only if for every x and every y there is an x,y that is an element of and A and if x,y is an element of R then y,x is an element of R.

Definition 15. R *is transitive in* $A \leftrightarrow (\forall x)\,(\forall y)\,(\forall z)\,(x,y,z \in A\ \&\ x\ R\ y\ \&\ y\ R\ z \rightarrow x\ R\ z)$.

Which I read as:

> R is transitive in A if and only if for every x and every y and every z there is an x,y,z that is an element of A and if x,y is an element of R and y,z is an element of R then x,z is an element of R.

When Rahn suggests the intersubjective equivalence of phenomenal sounds, he appeals to this kind of axiomatic modeling of this relation, available for decades. But why does Rahn ultimately reject this notion as a description for his epistemological problem? Why are listeners A and B *not* listening to *equivalent* sets of phenomenal sounds? Rahn asserts, "In their original listening A and B have not heard equivalent entities, and so have not heard the same musical things at all. They may have falsely assumed that they have heard equivalent things, and they may after some discussion come to hear equivalent things in the future, but the original two assimilations of experience were too radically different to be called equivalent" (1974, 9).

Rahn eventually settles on the intersubjectivity of the two listeners' experience as being describable via the notion of fuzzy isomorphism, which Rahn defines as follows:

> Two sets of sounds C and D are (fuzzily) isomorphic IFF there exists a one-to-one correspondence R matching sounds between them so that for any two sounds a∈C and b∈C, if a′∈D and b′∈D are respectively the images of a and b under R, the measures of the time and pitch intervals between the time points and pitches of a and b are quantitatively the same to with given limits L1 and L2 as the corresponding measures between a′ and b′, and a is louder than b IFF a′ is louder than b′, and a and b belong to the same instrument class in C IFF a′ and b′ belong to the same instrument class in D; and the pitch interval between a and a′ falls within limits L3, and the difference (or ratio) between the time intervals between a and b and between a′ and b′ is within some limit L4, and a and a′ belong to some instrument class. (1974, 10–1)

Rahn points out that, "'fuzzy isomorphism' is as a relation itself precise. The 'fuzziness' appears only in the fit that the relation provides between two sets of sounds."[13] Rahn borrows for his approach to this isomorphism Apostel (1960), which concerns models. Rahn's use of "image" is odd, for Apostel (Ibid., 128) states that the relation of model to prototype can be images, perceptions, drawings, formalisms (calculi), languages, of both physical systems. Why would Rahn not state that the relations being compared isomorphically are perceptions or perception-statements? The problem with these is, again following phenomenalism, that they seem to be purely subjective. "Image," as something

[13] Ibid., 10 n 2. Ironically, Rahn in another time and place says that, "if an analog communication ever does connect perfectly, so that the communicate has precisely the experience intended by the communicator, or, to avoid the intentional fallacy, so that all communicates have precisely the same experience, we shall never know. Isomorphism of such experience is untestable" ([1979] 2001, 59).

out there, in the world, and evoking Riemann, seems more objective. Images of sounds are representations of sounds, not sounds themselves.

What, then, is the general significance of this discussion? It locates the traditional problematic of intersubjectivity and solipsism as being answerable by mathematical set theory, extending set theory from the mathematical to the musical to the, in Carnap's language, "heteropsychological" or cultural domains. As with experience and theory, the personal and public for Princeton Theory seem remarkably polarized, and yet because of this polarization they are able to communicate, to be dialectically mediated. Let us recall that Rahn is writing during roughly the same time of cultural relativism that led Fred Lerdahl, for example, to search for musical universals.[14] Rahn is writing after *Compose Yourself* and at least Randall's Turn. Rahn is trying to define, using the armature of modern set theory, the objectivity or intersubjectivity of listening in the face of the solipsism of phenomenalism, on the one hand, and cultural relativism of the late 1960's, on the other. So when Rahn moves on to say that, "what is needed is a single standard set of sounds to which each other set in a composition would be isomorphic; but this we do not have" (1974, 11), he is accepting the collapse of objectivity into relativism and/or an intersubjectivity of listening definable by fuzzy isomorphism. As he said earlier, "We take it as established that discrimination [between phenomenal sounds or the individuals of the theory] varies with the physical equipment and 'mental set' of the 'subject'" (Ibid., 7). Rahn is defining—rather explicitly—his audience of qualified listeners, varying physiologically and culturally, all under the sign of two listeners, sitting side by

[14] Lerdahl 2003; recall that Lerdahl earned the M.F.A. in composition at Princeton in 1967.

side, listening to Beethoven's Fifth Symphony. Rahn's epistemological problem is therefore also a social one, the attempt to use formalism to solve the epistemological problematic a stand in for the social problematic, a process of mediation which Fredric Jameson termed the political unconscious.[15]

4. Boretz's (Anti-)Solipsism

Before Rahn (1974) was Boretz's *Meta-Variations*. In a virtual argument with Leo Treitler, Boretz in that work discards *metaphysical* solipsism as its foundation: "Treitler's effort to attain a radical relativism actually reverts, because of his failure to recognize some vital distinctions, to a metaphysical solipsism, as impossible of realization as the 'objectivity' it purports to supplant" (Boretz [1969] 1995, 12–13 note 2). Metaphysical solipsism is here a threat to be avoided, but what led Boretz to this writing this footnote? The note glosses this argument in the body of the text: "This inseparability of the 'fact' from its relational description is perhaps the principal contribution of twentieth-century philosophy to all fields whose domains consist of phenomena of experience of any kind, and its recognition makes it impossible to sustain an intellectual attitude that ignores conditions, standards, or characteristics of discourse in confronting 'objects of thought'" (Ibid., 12). This evokes Sellars ([1956] 2000), which Boretz cites later in reference to *Meta-Variations* (Boretz [2000] 2003, 459). To paraphrase the point, all experience comes to us theoretically-inflected, observation comes theory-laden, so we should be intellectual rather than

[15] See Jameson (1981, 17–102) and Drott (2005).

mystical or celebratory in our approaches to musical discourse. Music is no less theory-laden than other domains about which we can be cognitive. The "given" in experience is not so much given as created, taken. Boretz, contra-Treitler, continues: "In his rejection of an 'objectivity' based on an elusive empirical Given, he seems unaware of any middle ground worth considering short of a complete retreat into 'subjectivity.' What he declines to take account of is the possibility of *intersubjectvity*" (Ibid., 12–3, n 2, emphasis original). Theory-ladeness seems to commit us to subjectivity—to "radical relativism"—which seems to collapse into metaphysical solipsism. Hilary Putnam unpacks the logic thus:

> First-person relativism sounds dangerously close to solipsism. Indeed, it is not clear how it can avoid being solipsism…. If you and I are not the first-person relativist in question, then the truth about me and about you and about the friends and the spouse of the first-person relativist is, for the first-person relativist, simply a function of his or her own dispositions to believe. This is why first-person relativism sounds like thinly disguised solipsism. (Putnam 1992, 75–76; quoted in Mosteller 2006, 12)

The relativist, like the metaphysical solipsist, in a sense projects herself and her truths out into the world, creating others and their truths for them. As Woods said, "the external world and other persons are representations of that self having no independent existence" (Woods 1960). Intersubjectivity, however, perhaps as defined by Rahn, intervenes as a reality principle.

Just three years after Boretz's argument with Treitler, however—at the same time that *Meta-Variations* was still being published serially in *Perspectives of New Music*—Boretz (with Edward T. Cone) would claim radical relativism as his own position: "An even more radical relativism, in which standards of musical

cognitivity are still further detached from universals—among others, from those extramusically invoked standards of 'unified science' themselves—is suggested in the writings of some younger composers (cf. the essays by Randall and Boretz in the present volume)."[16] It is unclear whether the two radical relativisms refer to the same thing—the former could be a relativism as regards the given in experience, the latter, a relativism about universals; and the given does not have to be a Platonic universal—but if they do refer to the same relativism, then it is also unclear how this avoids the metaphysical solipsism Boretz had unpacked and warned about just three years earlier, and the line of thought Putnam discusses. I would argue that this moment implies a realization on Boretz's part: the move from the demand for communication to the problematization of intersubjectivity to the solipsistic, another indicator of the Turn.

For the Boretz of *Meta-Variations*, and long after, music is thought. Further, we saw in Chapter Three how Babbitt privileged the intellectual over heard aspects of music. If music is thought, and thought is internal, within the individual mind, then the assertion of solipsism seems the only tenable position. I am alone, with my music, which I hear in my own mind. Boretz knows that solipsism is untenable, however, but he must start there because he starts from the position that music is (his own) cognition. The question of how to get outside of the individual mind then presents itself. In fact, the motion to externalize his thoughts is not simply because he is a composer creating musical worlds—as stated, that seems ideological or at least rhetorical—but rather, Boretz builds his (re)construction of music *in order to prove that the external world*

[16] Boretz and Cone (1972, ix). The quotation refers to Boretz ([1970c] 2003) and Randall ([1967] 2003]).

actually exists, in spite of his commitment to his own mind and solipsism. The goal of *Meta-Variations*, then, the reason for writing it in the first place, arises because of the threat of solipsism and its both seeming necessity and yet absurdity. Boretz's goal is to create the external world in order to prove to Boretz himself that he is not alone (with his musical thoughts, his music). The external world intervenes as a reality principle, for, once objectified, out there, it reflects back at him and shows that other musics and people really exist. While similar to the Other in the phenomenology of Emmanuel Levinas, which proves to the self that the self exists, the difference is that Boretz starts from his own self, projects it out into the world of his own creation, receives a signal in return, and returns, whereas for Levinas the self constitutes itself in its confrontation with the Other. (We shall return to Levinas in Chapter Five.)

Indeed, despite the earlier discussion in *Meta-Variations*, a metaphysical solipsism seems to be exactly Boretz's later position. (As represented, for example, in Boretz 2005–2006 and 2008.) For Boretz, in Martin Brody's words, "there's no liminal zone, no wiggle room in the space between solipsism and alienation" (2005–2006, 426). Either we engage the "real world" that is not so real after all, hence alienation, or we sink into our seats, alone: "Music fills me full of things to say, which I can not have a way to say; I am, ineluctably, completely,… on my own: alone with music" (Boretz [1999] 2003, 483). While Boretz's oracular tone here sounds a note of existentialist dread, *music* seems not to suffer so. Earlier in the same piece: "…the suigeneric language of music. 'Suigeneric' does not signify 'isolated,' or even insulated, just relatively *discrete* in the total cosmology of consciousness" (Ibid., 481, emphasis original). The self (Boretz) may be alone (with music), but music is unique without being so isolated.

Returning to Brody, and thinking reflexively, we might posit that Boretz's solipsism is self-alienating: the "self" in Boretz's writing takes on an alterity to the experiencing self. Boretz's inkblots, ([1982] 2003) rather than presenting an immediacy of the self, instead project that self onto the page almost literally, in fact distancing us and Boretz himself from his self-expression, that which seemed otherwise so close.[17]

While in this later text ("Music, as a Music" [1999] 2003) Boretz reduces others and discourse about music to music itself—music, as a music—it is precisely his existentialist dread, however, that marks his distance from a Husserlian reading of the reduction of others to the self—the reduction of transcendental experience to the "sphere of ownness." In Paul Ricoeur's reading: "Essentially, it is a question of transforming the objection of solipsism into an argument. I decide to abstract from all that is given to me as alien. This does not mean that I remain alone in the ordinary and non-phenomenological sense, as if the empirical solitude of an isolated or solitary man did not already assume association with other men. In the transcendental sense this means, rather, that I decide to take into consideration only 'what is my own' (*das mir Eigene*)" ([1967] 2007, 118). As Husserl says: "If I 'abstract' (in the usual sense) from others, *I 'alone'* remain. But such abstraction is not radical; such aloneness in no respect alters the natural world-sense, 'experienceable by everyone,' which attaches to the naturally understood Ego and would not be lost, even if a universal plague had left only me" ([1931] 1999, 93, emphasis original).

[17] Indeed, Boretz told me in personal conversation that Naomi Boretz created the inkblots, not Boretz himself.

This quotation comes from the fifth of Husserl's *Cartesian Meditations*, which prompts us to examine the Cartesian legacy of the problematic of solipsism. In his *Meditations on First Philosophy*, written during the Thirty Years' War, Descartes begins by stating that he, "realized it was necessary, once in the course of my life, to demolish everything completely and start again right from the foundations if I wanted to establish anything at all in the sciences that was stable and likely to last" ([1641] 1998, 76). From here Descartes sits "quite alone" (Ibid.) and doubts his senses, body, God, his former beliefs, mind, extension, geometry and arithmetic and the world. Descartes then asks, "Does it now follow that I too do not exist?" His answer? No. *I am*, *I exist* (Ibid., 80). After retelling his tale of doubt, Descartes then asserts that what he is, is an entity that is thinking: "At last, I have discovered it—thought; this alone is inseparable from me. I am, I exist—that is certain. But for how long? For as long as I am thinking…. I am, then, in the strict sense only a thing that thinks" (Ibid., 82). Indeed, Boretz ([1982] 2003), entitled "Talk: If I am a Musical Thinker," emphasizes primal musical self-expression but begins from the premise of musical thinking. Featuring Rorschach inkblots, the text begins with Boretz and his musical thoughts: "We need to think sensitively and introspectively and consciously—like expressive people—about our thought, our silence, our sound in music and talk" (Ibid., n.p.). And more recently, Boretz begins his reflections on the fiftieth anniversary of *Perspectives of New Music* thus: "Composers are thinkers. Composing is thinking" (Boretz 2012b, 9). At the moment when he asserts with clear certainty that he is a thing that thinks, the egocentric predicament presents itself, for Descartes has confined himself to his own ideas, subsequently finding it difficult if not impossible to move to the external world.

(Runes 1960, *s.v.* ego-centric predicament) As Descartes says, "the chief and most common mistake which is to be found here consists in my judging that the ideas which are in me resemble, or conform to, things located outside me" ([1641] 1998, 88–9). The question of solipsism now intervenes: if the project is to (re)construct all that exists, after having demolished everything and starting with the firm, unshakeable foundation of the thinking I, how do we construct the world, the rest of existence? If we fail at this project, the threat is that only the self exists: solipsism.

Johnstone (1991, xvii and 15) helpfully catalogues the types of solipsism he finds following in the wake of Descartes' solipsistic moment.

> *Internal World Solipsists*: the world of one's own representations is all that exists.
>
> The Sensa Solipsist, for whom what exists is the private world of one's own sensations or representations.
>
> The Lingua-Sensa Solipsist, or the Sensa Solipsist as portrayed by Wittgenstein.
>
> *Observed World Solipsists*: the world exists only in as much as it is perceived by oneself.
>
> The Ephemerata Solipsist, for whom any portions of the world not actually perceived by oneself do not exist.
>
> The Monopsyche Solipsist, an Ephemerata Solipsist whose sole concern is to deny the existence of other minds.
>
> The Sense Data Solipsist, a radical Ephemerata Solipsist who also denies the existence of all properties and relations not actually perceived.

It would seem that recently Boretz presents either the position of an Ephemerata Solipsist or a Sense Data Solipsist (it is difficult to say), given his following

remarks: "And as to the question—it's been raised—'if music is brought into being by my hearing ("composing") it, does that mean it doesn't exist before (or unless) I hear it?'—well, doesn't for me, anyway" (2005–2006, 469). In fact, Boretz here seems to combine features of both the Internal and Observed World Solipsists, if we assume, as he may very well not, that music is an externally existing entity—external to the subject's mind. If he does not, then he presents the position of the Internal World Solipsists: music in no way exists out there, in the world. It is taken, not given. Later, Boretz would seem to endorse these same positions, but given his use of the words "world" and indeed "universe," in the following quotation, specifying his exact position is difficult. In other words, Boretz here seems to accept the notion that music exists in some ways, at least, external to the cognizing subject. If so, he would here seem ambivalently to present the position of the Monopsyche Solipsist: "Does it seem, then, that an almost self-inscrutable singular 'I' looms as the natural citizen of a musical world whose only determinacy is the feel of experience? Does it get down to subjectivity? Or to solipsism, for those who really dislike the implications? Musical universes, perforce, of one inhabitant each?" (Boretz 2008, 73) As stated, Boretz here seems to argue for the Monopsyche Solipsistic position, and yet also assumes the existence of other minds: while the rhetorical questions raise the very real possibility that Boretz accepts this position—we all inhabit our own musical universes, with presumably no interaction—given that this is stated in the plural, we share at least this much. ("Solipsism binds us together.") Where we might read a position denying the existence of others—Boretz does not have access to other minds, therefore those other minds do not exist—nonetheless there exist multiple universes. Importantly, Boretz rhetorically moves from the

general, ontological/epistemological case, to the specifically musical case, the latter occurring only *after* the introduction of the word solipsism. Ontologically, we may be dealing solely with an extreme subjectivity: I exist as surely as you do. *Musically*, however, I have no access to your musicianship because I can be certain only that I exist, musically. Can I trust that you have such a thing as musicianship?

I would argue that all of this is far less bizarre than it may at first sound. Think of the various tests devised for the aural skills classroom to measure and ensure competency: non-verbal, verbal, bodily, transcriptional, vocal. These assume a functional intersubjectivity—I can know the contents of my students' consciousness, as demonstrated through these tests of competency. But can I really? How can I possibly know that my students hear the same things I hear when we sing various relations within the major scale, for example? How can we hear the same relations? We assume such agreement, we agree, socially and pragmatically, *to act* as if we understand one another, in order to make music theory as a discipline function relatively smoothly: a kind of pedagogical fiction. And yet, outside of behavior, I have no access to my students' musicianship, to their internal perspectives—just as outside behavior, Wittgenstein assumed no access to others' pains or toothaches. The perhaps fictional status of pedagogical intersubjectivity should encourage us to question the smooth functioning of our chosen discipline. Which Princeton Theory, both before and after the Turn, does, repeatedly. Reflecting on the problematics of communication, intersubjectivity, and solipsism makes our jobs a little more difficult, a little less transparent, encourages a little more reflection, distance, a questioning, searching. I would suggest we are the better for this difficulty, our discipline, more mature.

5. Boretz's Solipsism of the Present Moment

There is another way to articulate and historicize Boretz's solipsism and thus to develop the problematic of solipsism, and that is by discussing his evocation of a subtype called the "solipsism of the present moment," as discussed by Bertrand Russell, Ludwig Wittgenstein, and Nelson Goodman. (For reference, see Glock 1996, *s.v.* solipsism.) Before discussing that philosophical background, however, I wish to unpack further Boretz's position; I shall then discuss Russell, Wittgenstein, and Goodman's explanations and critiques.

Boretz argues the position of solipsism of the present moment thus: "Since to be in a given place in a given chronology is to have a unique sound, and since to have a unique sound is to be a unique thing, we may *truly* suppose that no two musical entities can be alike, that musical qualities, as elicited by attribution, are all ontologically distinct, rather than repeatable" ([1977] 2003, 425–26, emphasis added). And: "In music, as in everything, the disappearing moment of experience is the firmest reality" ([1985] 2003, 241). Each moment in music is fully ontologically different from each preceding and successive moment, and the only truly real moment is the current one. As Dubiel (2005–2006, 167) says, musical listening in this reading involves "constant ontological upheaval" of the music and presumably, given Boretz's general solipsism, the listener's own identity: neither the music nor I am who I was just a moment ago, at all. As Wittgenstein says, connecting solipsism to the problematic of personal identity over time: "Sometimes the most satisfying expression of our solipsism seems to be this: 'When anything is seen (really *seen*), it is always I who see it.' What should strike us about this expression is the phrase 'always I.' Always *who*?—

For, queer enough, I don't mean: 'always L. W.' This leads us to considering the criteria for the identity of a person. Under what circumstances do we say: 'This is the same person whom I saw an hour ago?'" ([1933–1935] 1958, 61, emphasis original; see also pp. 63–4) We might say, one beat ago.

Boretz, however, allows that over the span of an entire piece, "any moment is *commensurable* with everything else," and states that this potential for comparison would take place within the musical mind, activating memory during the passage of time, hence he terms it "retrieval" ([1977] 2003, 425–26 emphasis original). If each moment of music can be compared in memory then we can have a situation of musical identity: two entities can be the same. The crucial point, however, is that Boretz wishes to suspend musical memory, a move which creates false and true versions of musical identity, enabling, he supposes, each (new) moment to be fully vivid: "*True* identity is reserved, as always, for the only repeatable quality in music: being in the same place in the same piece" (Ibid., 427 emphasis added). We are to read that last clause as an impossibility, implying its negation: no two musical entities can be in the same place in the same piece, therefore there are no truly repeatable qualities in music. The reason for claiming this is Boretz's desire for a constant vividness in music, a sense of continuous adventure: "It seems that sheer ontological creativity is the desideratum of all readings: the multiplication of ways for things to be distinct, and the maximization of their distinctness" (Boretz [1977] 2003, 424). Creativity and distinctness ensuring life. (And, possibly, Cartesian certainty.)

In two places Russell discusses what Wittgenstein will later call the "solipsism of the present moment" (1979, 25), a position for which Boretz is arguing, I think largely for pragmatic reasons: it seems to ensure the greatest

degree of vividness in music, encouraging our discourses to approach the vividness we routinely ascribe to music. Boretz, in a sense, encourages us to listen/play directly *on* the beat, as opposed to behind or ahead of it.[18] Striking for Russell, besides his philosopher's patience in unpacking a position with which he ultimately disagrees, is the linguistic implications of this form of solipsism, which both Boretz and Wittgenstein will later thematize:

> How do we come to know that the group of things now experienced is not all-embracing [or, all that there is]…? This question is one of great importance, since it introduces us to the whole problem of how knowledge can transcend personal experience…. At first sight, it might seem as though the experience of each moment must be a prison for the knowledge of that moment, and as though its boundaries must be the boundaries of our present world. Every word that we now understand must have a meaning which falls within our present experience; we can never point to an object and say: "*This* lies outside my present experience." We cannot know any particular thing unless it is part of present experience; hence it might be inferred that we cannot know that there are particular things which lie outside present experience. To suppose that we can know this, it might be said, is to suppose that we can know what we do not know. On this ground, we may be urged to a modest agnosticism with regard to everything that lies outside our momentary consciousness. Such a view, it is true, is not usually advocated in this extreme form; but the principles of solipsism and of the older empirical philosophy would seem, if rigorously applied, to reduce the knowledge of each moment within the narrow area of that moment's experience. (Russell ([1914b] 1956, 133–34, emphasis original)

Although evoking an ontology, Russell frames the issue primarily as an epistemological one, whereas for Boretz the composer/theorist, the issue is

[18] I am reminded here of Emmanuel Levinas' comments about the future, which resonate: "The future is what is in no way grasped. The exteriority of the future is totally different from spatial exteriority precisely through the fact that the future is absolutely surprising. Anticipation of the future and projection of the future, sanctioned as essential to time by all theories from Bergson to Sartre, are but the present of the future and not the authentic future; the future is what is not grasped, what befalls us and lays hold of us. The other is the future" ([1947] 1987, 76–7).

fundamentally a matter of how knowledge of what there is creates what there is. To paraphrase, the problem of solipsism of the present moment is important for Russell because it raises the question, discussed earlier in relation to Rahn (1974) and Boretz's general solipsism, of the intersubjectivity of experience and knowledge. Russell evokes the notion of a prison to describe where Boretz would locate ultimate freedom: each moment, now fully new, now fully free. For Russell, because a solipsism of the present moment knows no "outside" to this experience, knows no then, only now, there can be no freedom, no future, only (past and) present. The solipsist of the present moment knows only that which must be because it *is*, not that which could be because it has yet to occur.[19] Where the solipsist of the present moment presents a radical denial—an atheism—of anything that lies outside *now*, Russell urges a "modest agnosticism." Boretz, we must conclude, is nothing if not extreme in his application of the principles of solipsism.

But Russell goes further by providing two refutations of the position of solipsism of the present moment, which, as is typical of Russell, fall into empirical and logical replies, respectively. Firstly, in the empirical reply, Russell evokes cases involving memory of something that is not currently in existence: although not currently listening to the piece, I can assert with certainty that the D follows the opening melodic C♯ in a naïve hearing of Mozart K. 331, hence there are things that lie outside this present moment, hence a solipsism of the present

[19] I wonder, too, if Russell is implicitly articulating a problem with the facticity of the already existing: given that Russell is not necessarily thinking of *aesthetic* experience, to embrace the prison-like solipsism of the present moment is to give up on the genuinely creative, which in an aesthetic situation, such as music composition, would not present such a problem: again, we routinely hear each moment of music as fresh, alive, free. The question is whether hearing the past or future within the present will increase that vividness.

moment is invalid. Memory does exist—is real—as surely as the last moment slips into now, into the future. As Russell says:

> We know by memory that hitherto we have constantly become aware, in sensation, of new particulars not experienced before, and that therefore throughout the past our experience has not been all-embracing. If, then, the present moment is not the last moment in the life of the universe, we must suppose that the future will contain things which we do not now experience…. It is certain that the world contains some things not in my experience, and highly probable that it contains a vast number of such things. ([1914b] 1954, 135)

Russell's logical refutation of the solipsist of the present moment again involves proof of the possibility of things that we are not now experiencing. Russell asserts, "We may know propositions of the form: 'There are things having such-and-such a property,' even when we do not know of any instance of such things." (Ibid.) Russell includes here mathematical relations, but in music theory this would include objects and relations discussed in Babbitt's ([1946] 1992) dissertation, which lie prior to experience for Babbitt, in a Platonic sense. The later Boretz, in his role as a solipsist of the present moment, seems to deny the possibility of knowledge by description, implying that knowledge can only occur by acquaintance. This distinction, introduced and discussed by Russell himself ([1912] 1997, 46–59), is restated by the pre-Turn Boretz in *Meta-Variations* as the distinction between music as, "an experiential domain that is not only *thought about* but also, apparently, *thought in*" ([1969] 1995, 26, emphasis original). Thinking *about* music translates Russell's notion of knowledge by description, and thinking *in* music translates the notion of knowledge by acquaintance. According to Russell, "We shall say that we have *acquaintance* with anything of which we are directly aware, without the intermediary of any process of

inference or any knowledge of truths" ([1912] 1997, 46, emphasis original). Knowledge by acquaintance involves, "things immediately known to me just as they are" (Ibid., 47). Knowledge by description, on the other hand, does not involve direct knowledge of sense data, but rather knowledge of physical objects themselves, such as a table: "There is no state of mind in which we are directly aware of the table; all our knowledge of the table is really knowledge of *truths*, and the actual thing which is the table is not, strictly speaking, known to us at all" (Ibid., emphasis original). All that is known to us are the sense data of the table. Similarly, for Russell, other people's minds, thoughts, or internal perspectives cannot be known to us by acquaintance, but rather only by description (Ibid., 52). Again, Boretz, as solipsist of the present moment, denies knowledge by description—thought about—including, given his general solipsism, knowledge of other minds. The later Boretz seems to suggest that while we may *be* about music, when it comes to thinking music, we may think *in* music, but not *about*: music is music, not language, its own interior space.

As stated, connected to solipsism generally, which asserts that "all that is real is my experience," is solipsism of the present moment: "All that is real is the experience of the present moment" (Wittgenstein 1979, 25). Boretz, as we have discussed, supports both views: all that is real is my experience of or during the present moment. I am interested now in unpacking what Wittgenstein says in response to the assertion of solipsism of the present moment. Wittgenstein's first move is to draw the distinction we just have, between solipsism generally and one of the present moment, thus temporalizing solipsism. He next presents a number of considerations: Wittgenstein identifies the present moment with the subject of experience; he suggests that, contra most considerations of solipsism,

and indeed his own later discussion of the private language argument (to be discussed later in this chapter), in the situation of a solipsism of the present moment we *can* have a solipsistic language: "We may be inclined to make our language such that we will call only the present experience 'experience.' This will be a solipsistic language, but of course we must not make a solipsistic language without saying exactly what we mean by the word which in our old language meant 'present'" (Ibid.). This seems to involve a language determined by definition, which Wittgenstein will later problematize in the *Philosophical Investigations*: mere naming. (Boretz encourages us to experience, with no names.) Wittgenstein next considers what Russell had said in an attempt to justify solipsism of the present moment and memory: "Russell said that remembering cannot prove that what is remembered actually occurred, because the world might have sprung into existence five minutes ago, with acts of memory intact. We could go on to say that it might have been created one minute ago, and finally, that it might have been created in the present moment."[20] Thus, a solipsism of the present moment.

Wittgenstein next re-temporalizes solipsism of the present moment by suggesting the solipsist of the present moment envisions time moving in front of herself in a spatial sense—she supposedly exists at a Euclidean point, and time moves future, to present, to past, right to left on the page. But:

> There is a grammatical confusion here. A person who says the present experience alone is real is not stating an empirical fact, comparable to the fact that Mr. S. always wears a brown suit. And the person who objects to the assertion that the present alone is real with "Surely the past and future are just as real" somehow does not meet the point. Both statements mean

[20] Wittgenstein (1979, 25). I have been unable to find the reference in Russell.

> nothing…. Russell's hypothesis was so arranged that nothing could bear it out or refute it. The point of saying that something has happened derives from there being a criterion for its truth…. Such sentences seem to mean something. But they are otiose, like wheels in a watch which have no function although they do not look to be useless…. My method throughout is to point to mistakes in language. I am going to use the word "philosophy" for the activity of pointing out such mistakes. (Wittgenstein 1979, 25–26)

Wittgenstein's therapeutic method of philosophy here is to point out that when the solipsist of the present moment claims that only the present is real, she commits a grammatical error in assuming that this is an empirical proposition, capable of being proven or disproven. Wittgenstein suggests it is, instead, a psychological statement, a statement of personal belief with which we cannot agree nor disagree (Pears 1987, 36). We should accept the solipsist feels that way—that is her report—and move on.

Before doing so, however, I would like to examine Nelson Goodman's discussion of solipsism of the present moment, which occurs in two places in *The Structure of Appearance*: during a critical commentary on Carnap's *Aufbau*, and in the context of speculations about the nature of time. Firstly, in discussing the basic units of Carnap's system—the *elementarerlebnisse* abbreviated as *erlebs* and discussed in Chapter Three of this dissertation—Goodman states that although the units present the perspective of the subject, the system has yet to construct the subject, thus:

> Although the system is solipsistic in a loose sense [which Carnap calls methodological solipsism, as discussed earlier in this chapter], it by no means embodies a "solipsism of the present moment." It commences with a set of momentary erlebs that together exhaust the total temporally long stream of experience. That does not solve the problem of ordering the erlebs in time, nor of distinguishing past, present, and future; but it does

> make unnecessary, for instance, the construction of past experience solely in terms of memory images and other present experience. ([1951] 166, 154)

As we discover time and again throughout these texts, the threat of solipsism is always present, hanging over the discourse like a dark cloud. The *erlebs* relieve the strain of constructing temporality within the system from the perspective of an ever-changing present moment—solipsism of the present moment—because, "their selection as basic units or 'ground elements' does not imply that *erlebs* are actually separate units marked off in experience, but merely that assertions can be made about, and relating, such places in the stream of experience. *Erlebs* are preferred as ground elements because they seem to be the closest practicable approximation to what is given, namely, a single unbroken stream of experience" (Ibid.). Interesting here is the digital quality of temporality, not as experienced, but as rationally reconstructed: as Dubiel (2005–2006, 168) mentions regarding Boretz's temporality of the Mozart variations, onsets of pitch events define moments in time, with, as Wittgenstein says, those moments ordered in a single stream blurring past, present, and future. Recall that Carnap begins his system from the memory of past similarity. Goodman intervenes here by implying his system will not thus begin, which we are to read as an improvement. (See Goodman [1951] 1966, 171–73, 189–204, and 219–24.)

In the highly speculative ending to *The Structure of Appearance* entitled, "Of Time and Eternity" (355–80), Goodman again discusses solipsism of the present moment, while discussing the temporal field, by conceding that any phenomenalistic system (such as his own or Carnap, Rahn, or Boretz's) will take as basic the experience, "confined to the experience of a single subject; but does it comprise the lifetime experience of that subject, or only a moment of that

experience, or something in between? The advocate of 'solipsism of the present moment' confines himself to the experience of one moment…. For him there is only a single moment; his position depends upon denying that there are any phenomenal temporal distinctions" (Goodman [1951] 1966, 377). Goodman denies that there is only one single moment in or to experience, asserting that we *do* make temporal distinctions: past, present, and future are real, from outside the perspective of the experiencing I.

But perhaps we read too quickly Boretz's earlier comment, that, "in music, as in everything, the disappearing moment of experience is the firmest reality" ([1985] 2003, 241). We read it as simply specifying that this moment is *the* real moment, all other moments accessible in only an unreal sense, and ultimately inaccessible. That reading actually implies a kind of atemporality: this moment is a frozen moment, the *nunc stans*, standstill, or *Jetztzeit* of eternity, Russell's "prison" which for Walter Benjamin, for example, opens out onto Messianic time: a patient waiting or anticipation.[21] As stated earlier, Goodman in fact ends *The Structure of Appearance* with a meditation on time and eternity, arguing that, "although a color quale, for example, occurs at times and persists through periods, it is nevertheless literally 'out of time,' i.e., it is discrete from all times. It is, in a word, *eternal*…. Observe that the eternity of an individual is no bar to its occurrence at some times or its failure to occur at others; indeed, only what is eternal is with a time. Theologians have perhaps overlooked something here" ([1951] 1966, 358, emphasis original). Perhaps Boretz, then, in fact *temporalizes* the present moment by using the locution "the disappearing moment of

[21] See Benjamin ([1940] 2003). Heidegger, however, analyses the reckoning of the ordinary conception of time as a *Jetztzeit*; see Heidegger ([1927b] 2010, §81).

experience." Here, it is not now that is most real, but experience, the now of experience, but not an atemporal now, rather a now slipping into the past, always already on the move. I can feel it draining away.

6. Babbitt, Guck, Wittgenstein's Private Language Argument, Solipsism and Language

In response to Guck (1997), Babbitt (1997, 135–36) evokes the specter of solipsism by bifurcating the allegedly formal from metaphorical discourses within her talk, explicitly problematizing Guck's analytical use of metaphor by stating, in part, "I feel obliged to wonder why she approaches the danger zone of that vulnerable yet invulnerable private language" (Babbitt 1997, 135). This is the mid-way point of a long exhalation for Babbitt—one page-long paragraph—during which he will diagnose the problems with all "metaphorical" discourse in music, evaluative discourse about music, possible worlds semantics, music's lack of denotative power, evoking the work of Goodman on philosophy of art and language, and, as I would now like to discuss, Wittgenstein—the late Wittgenstein, of the *Philosophical Investigations* ([1953] 2009). For this latter text contains the most well-known discussion of a "private language," and Babbitt's evocation of it immediately strikes me as odd, for Wittgenstein's whole point is that it does not even exist. If Wittgenstein is correct, then Babbitt's problem with Guck's discourse cannot exist. Furthermore, if Wittgenstein's critique of the possibility of a private language succeeds, then the epistemological conception of solipsism does not exist either, and, following logical positivism, the discussion

about epistemological solipsism, if not our tracing of it, has been metaphorical, metaphysical, a psychological but not cognitive, problematic.

Wittgenstein interpretation is famously difficult and contentious, and the interpretation of what is commonly referred to as the private language argument is no different. In the most generally agreed upon reading of the private language argument, it begins at §243 of Wittgenstein ([1953] 2009), where he defines the notion of a private language itself, with a dialogue within a dialogue: "But is it also conceivable that there be a language in which a person could write down or give voice to his inner experiences—his feelings, moods, and so on—for his own use?—Well, can't we do so in our ordinary language?—But that is not what I mean. The words of this language are to refer to what only the speaker can know—to his immediate private sensations. So another person cannot understand the language." Or later: "Now, what about the language which describes my inner experiences but which only I myself can understand?" (Ibid. §256)

In using metaphors like "tantalizing," Babbitt implies Guck is expressing a private language, accessible only to Guck herself, made up of words behaviorally connected to the immediate, private sensations they represent. Babbitt cannot understand this language—he ends his long paragraph with the word "unintelligibility"—and neither, if Babbitt is correct, can we have any hope to understand it either. Babbitt implies that Guck here, more to our point, is a solipsist, for the language she speaks is that of a solipsist: as Johnstone (1991, xvii and 15) would say, Guck is a Lingua-Sensa Solipsist, "for whom what exists is the private world of one's own sensations or representations," "as portrayed by Wittgenstein." How the private language argument relates to solipsism is

simple: the private language, were it to exist, would be the language the solipsist speaks, to herself. Or, put another way, the music to which the solipsist listens is a private music, one which we (if we exist) cannot hear.

As stated, the point of Wittgenstein's discussion is to deny the very possibility of such a private language:

> Look at the blue of the sky and say to yourself, "How blue the sky is!"—When you do it spontaneously—without philosophical purposes—the idea never crosses your mind that this impression of colour belongs only to *you*. And you have no qualms about exclaiming thus to another. And if you point at anything as you say the words, it is at the sky. I mean: you don't have the pointing-into-yourself feeling that often accompanies "naming sensations" when one is thinking about the "private language." Nor do you think that really you ought to point at the colour not with your hand, but with your attention. (Consider what "to point at something with one's attention" means.) ([1953] 2009, §275)

Or, more directly: "The proposition 'Sensations are private' is comparable to 'One plays patience [solitaire] by oneself'" (Ibid., §248). It provides no new information, is analytic or tautological. And, as we discussed earlier with regard to solipsism of the present moment, it is not a factual claim about the world that can be evaluated.

Perhaps Babbitt implicitly disagrees with Wittgenstein, assuming, with Ayer ([1954] 1986, 76) that a private language *is* possible, and that Guck has created one. Is Babbitt's problem, then, with the (lack of) sociality implied by this private language, that is, is the loss for music theorists, or, rather, is it a loss for music? Let us remember that initially this occurs for the use of a metaphor—"tantalizing"—to discuss the second-measure F in the space of Brahms' E♭ minor Intermezzo, Op. 117, no 1. An assumption on Babbitt's part is that *not* all language in the space of music *is* always already a metaphor, which is Boretz's

later position, for example (Boretz [1999] 2003). There is more, because Guck is arguing from that F and its description to a meta-analytical thesis that to Babbitt must have seemed an overturning of all for which he himself had worked. Guck's broader argument is that we can use metaphors which express our heard experiences with music in rigorous ways, ways that should implicitly satisfy Babbitt's desire for scientific discourse. But this is surely the center of the problem for Babbitt: what, ultimately, are scientific discourses, discourses of sciences of? Facts somehow in the world. In music, this means not the score, not acoustic stimuli, but experiences. Let us recall Chapter Three, wherein we discussed logical positivism/empiricism, and its traditional reading as using the verifiability of experiences as the foundations for meaning, cognition, therefore science. But who is to say protocol sentences are themselves sharable? (See Ayer [1954] 1986, 64–5.) Hence the private language problem. Science uses experiences as both foundation for and confirmation of its generalizations. But it expresses these in language, and this will always be a problem for a discourse that understands music as fundamentally non-linguistic. How is an F *not* a metaphor? Through convention. But although referring to it as "tantalizing" has yet to be established as convention, it is hearable, hence sharable, hence public.

Again, what is the source of Babbitt's perturbation? Although it appears to be not simply the use of metaphor, but its normative implications, I would like to argue a deeper problematic for Babbitt, which is that, as just stated, Guck, unlike, for example, Randall, makes claims that her metaphors can serve as the foundation for a science: Babbitt's perturbation is not with Guck's use of metaphor, but with Guck's suggestion that metaphors could be used within or to form the basis of a scientific discourse. Whereas Randall seems to Babbitt to be

expressing and have created a frankly private language, a frankly metaphysical discourse, hence there exists no claim on Babbitt's own ideals of a scientific discourse, Guck, on the other hand, claims that her metaphysical words—metaphors—can be treated rigorously, scientifically. Not, however, for the normal reason of displaying the personal—that is, not for a social taboo (though he might have felt that too)—not for the thicket of problems he unpacks in using discourse in the space of the Brahms piece, nor for failing the scientific test of verifiability. The usual reading of this situation is that Guck creates a category error, confuses domains. But even that, I think, would not be the source of Babbitt's deeper perturbation. The deeper problem is that using metaphor in the space of science prompts the question: what is *not* a metaphor? If music is a domain in which *all* language is meta—as Babbitt says, "the never-never land of music in the land of putative denotative reference"—then we cannot have a science of music. If music cannot be transferred into discourse, then there is no science of music. If there is no science of music, then everything for which Babbitt had fought since—we are led to believe—the 1930's, is null. Much of Babbitt's discourse is about language, but that is a subsidiary concern, important for its relation to musical discourse as a *science*, which, as we shall discuss in Chapter Five, is itself important for ethical reasons.

I am talking about Babbitt's comment on the potential for a private language in the space of solipsism because the alleged solipsist would speak a private language. So when Babbitt accuses Guck of sliding into a private language, he shows his own concern with the situation of the solipsist, his own tension with the problematic of solipsism. As discussed, Babbitt is the one, following Schoenberg, and famously, to think music and society from the

perspective of the lone(ly) individual, not Guck. There is nothing in Guck's writings to indicate she finds communication problematic, but if she finds communication problematic, this appears not to prevent her from still attempting to do precisely that.

All along experience has been bound up with theory, discourse, of representation, of grasping music's temporal flux, with problems of communication, hence the preceding discussion leads directly to where we now find ourselves. Communication challenges solipsism, as surely as solipsism challenges communication. The question: to what degree, in what manner, is music(al experience) pre- or para-linguistic for these thinkers? It seems that any experience that is non-linguistic is simply not recoverable, metaphysical, solipsistic, or at least profoundly subjective. If music is non-linguistic, it seems unclear how a logical positivist, or a music theorist working under the sign of logical positivism, would conceive of sharing music. Resonance between souls? Love? Hardly. Babbitt: "Ben [Johnston] says that they [students] don't listen, and I agree, but how do we find out whether they are really listening? We have to indulge in verbalization."[22] If we are to discover whether our students are "really" listening, they must verbalize what they hear. If they cannot bring into discursive space the non-verbalness of music, then it may not be the case that their experiences are not rewarding or valuable, it is simply that they are not recoverable, not knowable, cognitive. If not cognitive, not shareable; if not shareable, solitary, singular, solipsistic.

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[22] Westergaard ([1966] 1968, 72). Long ago, Moses Maimonides too contended the necessity of verbal communication: "We have no idea or notion of any other mode of communication between the soul of one person and that of another than by means of speaking" ([1190, 1904] 2004, 113).

But unlike the logical positivists whom Babbitt so admired, I think Babbitt actually thinks there is a problem with frankly metaphysical discourse, even if it does not claim a scientific rigor. Unlike a normal fact in the world—which the Vienna Circle would ordinarily take to be its object of inquiry—Babbitt is dealing with music, a traditionally aesthetic object, which he needed to *argue* was actually an object of scientific inquiry. There exists a certain defensiveness in Babbitt's confrontation with Guck, evidenced simply by Babbitt's need for the long paragraph, which seems less to do with Guck or her words than with the fragility of music in relation to discourse—or maybe the issue is that discourse is fragile in relation to music. Music is strong, but discourse can be twisted.

Could it be, then, that *music* is the private language of which the solipsist has been dreaming? That is to say, a sensation language that only the solipsist understands, private. Is this Princeton Theory's ultimate insight as it pertains to language and music? What are the implications of this position? How did we get here? Music is not a language, a verbal discourse: one may think outside or beyond or anterior to language. Music is, rather, its own entity. But more, music, like language, is a form of communication between the self and itself. Before the Turn, Princeton Theory was convinced that music is a language—hence the need to systematize axiomatically—but after the Turn, by some point, music is not a language. If I am a musical thinker, I am so outside language. Boretz and Randall end their massive two-volume collected essays, entitled *Being About Music*, with the following postscript: "If there is anything outside language, it cannot be said that there is. But there is. Is there?" (Boretz and Randall, 2003, 564) Relatedly, in conversation Boretz recently said that, troping

the Wittgenstein of the *Tractatus*, in the case of solipsism, we can only say it, and cannot show it.

V. Ethics

Ich bin du, wenn ich ich bin.

—Paul Celan, "Lob der Ferne"

Man, if not as Aristotle thought a political animal, is at all events a social animal.

—Karl Marx, *Capital* Vol. I

I must Create a System, or be enslav'd by another Mans

—William Blake, *Jerusalem*

This chapter argues that there exists an ethics in the writings of Princeton Theory, both in the sense of the authors pursuing a certain ethic while doing their theoretical work, and in the sense of their making ethics a topic of conversation. This argument serves as an intervention because twelve-tone music, its attendant theory, and composers specifically have been accused of *lacking* morality, a sociability. It is not apparent, for example, how to arrive at an ethics from the position of solipsism; Wittgenstein's early thought was taken by the logical positivists generally to dismiss ethics (and aesthetics) from discussion;[1] Carnap explicitly, and vehemently, rejected ethics as a pseudoproblem for philosophy; Princeton Theory's "hermeticism" (Korsyn 2003,

[1] This is not to claim that ethics was absent entirely from logical positivism. By 1963, ethics was on Babbitt's mind, as he, "took part in a panel discussion on 6 August entitled 'Ethical and Aesthetical Criteria of Value in Music Today,'" at the sixteenth annual conference of the International Folk Music Council (Babbitt 2003, 172). Unfortunately, Babbitt's comments were not published in the Council's journal.

185) implies a lack of sociability—indeed, a purposive withholding—and therefore a lack of ethics. Putnam (2008, 22–5) implies solipsism of the present moment is not capable of generating an ethics. Tomlinson (1993) charges all formalism with imperialism. Babbitt ([1958] 2003), as Susan McClary ([1989] 1993) has argued, appears to be the most isolating, indeed, *anti*-social of texts or arguments. While Babbitt's text actually circumscribes a particular group of composers—the "university" or "academic composer"—therefore Babbitt at least considered a restricted sociality, nonetheless that group has been considered elite (by Babbitt) and elitist (by McClary). (See Girard 2010 for further discussion.) I contend, however, that considered ethical positions appear in these writings, most prominently in those by Babbitt and Boretz. The goal of this chapter is to uncover, situate, and develop these positions. I shall problematize the ethical implications of Princeton Theory's admittedly uneven appeals to solipsism. I shall discuss Babbitt and Boretz's evocation of the is/ought distinction or fact/value dichotomy; argue that Babbitt's contextuality is itself an ethical position; that more recent writings by Boretz and Rahn argue a hermeneutic ethics, an ethics of musical and intersubjective interpretation; I develop Boretz's notion of taking time and care from a Heideggerian perspective; and I argue that there exists for Lewin particularly a manner in which music analysis is or should be moral, life-changing.

Throughout this chapter I shall be concerned for the most part with the ethical implications and claims of Princeton Theory, but of course moral considerations will play a part, and even meta-ethical considerations.

> The practical thinking of the agent trying to work out his own personal problems; this is the level of *moral* discourse…. There is philosophic thinking about the principles, patterns, and methods of making decisions in regard to moral problems; this reflective examination of practical thinking is the level of *ethical* discourse. Finally, there is the study of what might be called the logic and epistemology of ethics, the consideration of some very general problems which go beyond the scope of ethical reasoning (such as the differences between ethical and nonethical judgments, the nature and relation of freedom to ethics, the comparison of empirical science and ethics): this third level is that of *meta-ethical* discourse. (Bourke 1968, 209–10, emphasis original)

For example, when examining how Princeton Theory thinks we are to comport our discourses in relation to pieces while listening and other discourses, we shall be discussing ethical considerations. While discussing Babbitt's repeated invocation of the is/ought distinction, we shall be thinking at the meta-ethical level. When discussing how we are to live our (musical) lives, we deal with the moral.

1. Solipsism and Ethics

I stated that it seems less than obvious how to arrive at an ethics from the position of solipsism, especially metaphysical. Let us recall, from Chapter Four, Tomlinson's (1993, 20–1) charge that formalism coalesces solipsism into its motion, along with a host of other evils. This motive is in effect a repetition and expansion upon an earlier charge Tomlinson had made against formalism: "The presentist view of artworks as transcendent entities fully comprehensible without reference to the conditions of their creation sacrifices Geertz's expansion of human discourse for a solipsistic and ultimately narcissistic aestheticism"

(1984, 358). Keep in mind the notion that presentist formalism leads to solipsism and ultimately narcissism, for we will meet precisely these latter two terms, and their motion, from a different angle momentarily, serving as evidence for the position that especially high-modernist discussions of music are in some sense anti-social and wrong, morally.

In order to reestablish Boretz's solipsism, let us reread the following rhetorical questions, which Boretz has prepared and will go on to answer as his own position: "Does it seem, then, that an almost self-inscrutable singular 'I' looms as the natural citizen of a musical world whose only determinacy is the feel of experience? Does it get down to subjectivity? Or to solipsism, for those who really dislike the implications? Musical universes, perforce, of one inhabitant each?" (2008, 73) Let us recall too, the moment during Carnap's *Aufbau* ([1928] 1967, 2003), 224) when the other S_M is a construction within the world or universe of the self S, for this is one of the implications of solipsism, foundationalism, and phenomenalism. I would like to pursue the "ethics" of these positions by reading Hilary Putnam at length:

> A problem that arises… is that even if the construction succeeded in its own terms—even if, *per impossibile*, one were to succeed in (re)-constructing "the world" in terms of the philosopher's ontology—the primitive elements of that ontology are *my own* experiences. And there is something *morally* disturbing about this.
>
> To put the point in terms of Carnap's… notion of construction, suppose that my friend is a phenomenalist and believes that all I am is a logical construction out of *his* sense-data. Should I feel reassured if he tells me that the relevant sentences about his sense-data (the ones that "translate" all of his beliefs about *me* into the system of the *Aufbau*) have the same "verification conditions" as the beliefs they translate? Am I making a mistake if I find that just isn't good enough?
>
> If his avowals of friendship and concern are avowals of an attitude to his own sense-data, then my friend is *narcissistic*. A genuine ethical relation to another presupposes that you realize that *the other person is an*

> *independent reality and not in any way your construction*. (2008, 77–78, emphasis original)

This is an important critique, damning to phenomenalist systems, for following from the musically obvious position of phenomenalism is solipsism, but more, narcissism and amorality (or a disingenuous morality): a lack of the historical moment in discourse, but more, a lack of the simple acknowledgement of the difference of others. While we might assert a solipsistic position shows the solipsist's preoccupation with the difference of herself and thus others, such an assertion assumes others are more than simply narcissistic projections of the (solipsist's) self, and is not borne out by the phenomenalist problematic of solipsism, as discussed during the last chapter. The failure to absorb the face of the other is the tenor of Tomlinson's critique, made explicit on a different, more foundational, level by Putnam. To his credit, Boretz, for example, pursues at length and in detail the implications of *Meta-Variations*' phenomenalism: music is thought of or in the individual mind. To our great perturbation, this implies a moral position that we cannot countenance. We assert our subjectivities: the other must disturb his system. If the other is merely a construction within Boretz's system, then there can be no disturbance, no reality principle to intervene. Hence the loop, too, of relativism.

But can we recuperate an ethics within the Boretzian text, within, indeed, the position of solipsism? Does Boretz, following from solipsism, intend that we are merely constructs within his system? Is there a way in which solipsism in fact respects the alterity of the other? Putnam's critique of Carnap's methodological solipsism assumes that solipsism becomes an actual metaphysical solipsism. Must we make that assumption? No: assuming that

phenomenalism does not entail narcissism, the holding fast to the subjectivity of the self would seem to imply the same for all others: each of us has our system. Let us remember that for many years, and to a great extent even today, music theorists "have a system." It is not uncommon to be asked at conferences, not, "what are you working on, what is your area?," but, "what is your system?" Indeed, Boretz once told me that the first question George Perle asked of him, upon their meeting, was, "what is your system?" Contra the systems presented in Rahn (1974), Rahn (1979), and Rahn (1983), which their authors explicitly base on Boretz's *Meta-Variations*, a fundamental idea of Carnapian axiomatic systems is that each of us would have our own; one cannot simply hang one's system on the shoulders of another's; we are each of us responsible for constructing our own worlds to inhabit. ("I must Create a System, or be enslav'd by another Mans.") If each of us has a musical system/world/universe (implicit or fully cognizant), then the meeting of these systems would seem to force changes to both. To quote Putnam again, now explicitly troping Emmanuel Levinas: "I know the Other [*l'autrui*] is not part of my 'construction of the world' because my encounter with the other is an encounter with a *fissure*, with a being who breaks my categories" (Putnam 2008, 79, emphasis original). Can we claim that, in this reading, by presenting solipsism as asserting the fundamental difference between persons and their systems, Boretz maintains and respects the alterity of the other? Perhaps all that (musically) exists is populated by a field of, if not solipsists, then monads: "Musical universes, perforce, of one inhabitant each?" (Boretz 2008, 73) Each, "a one-person culture."[2]

[2] Boretz, personal communication. Were I to develop the monadic reading of Princeton Theory's ethics, I would discuss Leibniz ([1714] 1989), Husserl ([1931]

Martin Brody has recently offered a compelling reading of Babbitt's ethics along similar lines of thought—balancing self and other—which I would like to rehearse here. There exists in the Babbittian text a certain fervor, a *moral* demand to get our theories right, over and above the ordinary scholarly principles. Babbitt demands, according to Brody, "the highest level of accountability from everyone involved in the circuit of musical production and reception…. In Babbitt's universe, no one is beneath critique or contempt, no one is let off the hook. He speaks to us personally, and we have to take his judgments personally" (2012, 367). According to Stephen Dembski (2012, 7), "Implicit in his [Babbitt's] complex expressions was an expectation of understanding—that if you'd just listen, you'd get it—reflecting a consistent respect for the auditor." Babbitt speaks of musical citizenship, of responsible musicianship in the public sphere, one who must abide by verbal and methodological responsibility as a, "concerned and thoughtful musical citizen" (Babbitt [1965] 2003, 200). Thus while each of us maintains our critical faculties with respect to the other's discourses, precisely such a stance extends respect to the other. For absent is the condescension of the popular moment; present instead is an almost pedagogical ethics, ever rising to meet new mental and musical challenges.

Brody argues that Hannah Arendt's

> ethics of plurality and individual initiative provide an evocative context for rereading Babbitt. In particular, his arguments about specialization and contextuality—often and easily dismissed as a highly evolved snobbery or pedantry—resonate strongly with Arendt's reflections on the free actions of non-sovereign individuals in a pluralistic society. Babbitt's scrupulous dismantling of the metaphysics of music theory and his

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1999, §33, §55, and §56), Ricoeur ([1967] 2007, 106–07), Benjamin ([1928] 1998, 47) and Adorno ([1970] 1997, 42–5 and 259–61).

> ruthless disenchantment of musical culture yielded an ongoing dialectic of ontological creativity and rational reconstruction—a theoretical framework much like Arendt's—in which the social and epistemological aspects of creative speech and action are inextricable. (Brody 2012, 367–68)

Although the impact of Babbitt's methodological articles is to clear away discourse as a kind of epistemological hygiene—"Babbitt's scrupulous dismantling of the metaphysics of music theory and his ruthless disenchantment of musical culture"—nevertheless this is carried out, among other reasons, for the purpose of creating new, particular(istic) systems and/or musical worlds: "an ongoing dialectic of ontological creativity and rational reconstruction."

As with Rahn's (1974) discussion of the qualified listeners to Beethoven's Fifth Symphony, discussed during Chapter Four, Brody implies that Babbitt's contextuality—in the sense of a piece's self-referentiality: a piece creates or enables creation of its own analysis or system—models respect for individuality: "the free actions of non-sovereign individuals in a pluralistic society." Babbitt's contextuality is thus ethical in nature. In discussing Berg's discussion of Schoenberg, Babbitt states that,

> Those middle-period works of Schoenberg, the middle-period works of Berg [!], the middle-period works of Webern have this particular property in common. They are to as large an extent as possible self-referential, self-contained, and what I'm given to call "contextual." Contextuality merely has to do with the extent to which a piece defines its materials within itself.
>
> Now there is an obvious hazard here. The problem of contextuality again is a problem of the listener; it's a problem of the composer; it's a problem of the performer. Just consider what is involved. It means that when you come to hear such a piece, you are listening to a piece which is going to use perhaps physical materials which are familiar, but very little else that is familiar. You're going to have to proceed with this piece by a complete concentration on the piece as piece. You're going to have very little that you can carry with you from your memory of former piece, very

> little that you can carry with you by way of your experiences of past music. In other words, it is not very communal…. (Babbitt 1987, 167)

Babbitt phrases this renewed attention as a matter of necessity, but never answers the fundamental why-question. Why must I attend to this music in the manner Babbitt describes? Because I cannot rely on the kinds of listening I can rely upon in tonal situations, situations where I can anticipate the medial caesura, for example. Why else must I attend in the manner Babbitt describes? Because, as he said earlier, in relation to listening to Schoenberg's Op. 7 String Quartet in D-minor, "in order to hear that piece, in order to follow its sequence of events, in order to follow it as a cumulative containment, a successive subsumption—all those things that musical memory requires if the work eventually is to be entified as a unified totality, an all-of-a-piece of music—you had to listen to that piece very much as a thing in itself" (Ibid.). Here Babbitt tells us why we must hear a contextual piece as contextually defined: because we must hear each as "a unified totality, an all-of-a-piece of music," a fully-formed thing, a work. Our crucial next question emerges: why must we hear a work as a work? Besides historical answers, there is the ethical one: because this is what an ethical approach to the work, and implicitly, the author behind the work, requests. Why is it appropriate that we approach works that are contextual—an is-statement—with a particular mindset—an ought statement? Because there is an ethical move being made by Babbitt here. We *ought* to listen in particular ways, because each of these pieces *is* contextual. It is a moral issue because Babbitt is telling us how we are to *act*. I thus find myself arguing that Babbitt committed the fallacy of deriving an ought from an is. (Which we shall discuss in further detail in section two below.) Why would he do so? Because listening

in this manner, "had all these new rewards; it had all these new possibilities. The idea of writing a piece which is self-referential, self-contained, is of course an intriguing one, an exciting one" (Ibid., 167–8). Thus, a utopian gesture, not strictly a logical or epistemological one, lies within Babbitt's ideation of the notion of contextuality.

Brody continues discussion of specifically Babbitt's ethics by discussing Arendt's notion of "togetherness": "This revelatory quality of speech and action comes to the fore where people are *with* others and neither for nor against them—that is, in sheer human togetherness" (Arendt 1958, 180, emphasis original). We shall return to this notion, "that acknowledges the differences between people and practices" (Brody 2012, 369), but Brody argues it leads Babbitt to become a specialist. With the end of musical absolutes, "we are better off quizzing each other, he [Babbitt] suggests, than blowing smoke at our differences, proclaiming our bliss, and projecting our fantasies" (Ibid., 369). "Babbitt's specialist acknowledges the opacity of others; he recognizes that the tension between the 'communal' and the 'proprium' can only be provisionally resolved" (Ibid., 370). Insofar as Babbitt's specialist escapes the solipsistic problematic, that specialist acknowledges that she lives and labors (works) in a field populated by other individuals, each respecting the right of the other to her own ideas (in this case, regarding musical compositions, structure, each person's musical world). "Opacity" need not be absolute, solipsism; it is the spacing between the two—the "communal" and the "proprium"—which enables or describes Princeton Theory's ethics.

Recall that for Boretz, in at least some of his moods, a solipsism of the present moment is operative: only this moment, now, is really real. Putnam also

addresses this possibility, claiming it is immoral. Recall that in a post-Humean sense, solipsism can be read as negating the self: I never perceive a self, therefore the self does not exist. Recall, too, that in a Carnapian sense, the self is constructed at a later level of the rational reconstruction, it is not assumed as foundational. The question of personal identity then arises from these positions. If *I* change as a whole from moment to moment then there is nothing that keeps me in common, with myself. As discussed by Putnam, the name for this position is nominalism, and as discussed during the preceding chapter, Boretz does seem to assert it on a metaphysical level, not merely on a pragmatic or epistemological level. Putnam argues that this position presents a moral problem, and asserts that, "we are *responsible* for what we have thought and done in the past, responsible *now*, intellectually and practically, and that is what makes us *thinkers*, rational agents in a world, at all" (2008, 25, emphasis original). We cannot repress our past actions and act as if they did not occur; we must own them, in the present.

Following from his phenomenalism, if the other exists and implies an ethical relation for Boretz, then he follows Celan, maintains that I am only able to extend myself for you, for your benefit, after, if, I have first firmly established myself in myself. ("Ich bin du, wenn ich ich bin.") The self constitutes itself, and only then extends itself. The question of temporality now returns: when am I ever firmly established, such that I might only subsequently express concern for you? Unavailable seems to be the notion of self-constitution during or through the concern or care for the other, such as made famous by Buber ([1923] 1970, 54, 62, and 80): "There is no I as such but only the I of the basic word I-You and the I of the basic word I-It…. I require a You to become; becoming I, I say You. All

actual life is encounter…. Man becomes an I through a You." While we might maintain the placing of priority on self-constitution is Boretz's implicit philosophical position, following too from solipsism, it seems strikingly dissonant with respect to his work as editor and teacher, wherein we find a vigilant concern for his students, colleagues, whom he makes to feel personally attached.

2. The Fact/Value Dichotomy

In his argument with George Perle, familiar from Chapter Three of this dissertation, Babbitt concludes by saying that, "I suggested no evaluative conclusions (aware as I am that a descriptive or analytic statement entails no normative conclusion)" ([1963] 2003, 145). This distinction, between what is variously described as fact and value, is and ought, analysis and judgment, or the descriptive and the normative, is often repeated in Babbitt's writings, and takes on a different valence each time.[3] Dembski, in a memorial to Babbitt, recently raised the issue of Babbitt's ethics as regards his discourse and treatment of younger composers. In commenting on a younger composer's less than outstanding piece, Babbitt is reported to have offered multivalent words in response, which Dembski reads thus: "Milton had avoided compromising his philosophically grounded ethical stance by side-stepping the common

[3] Wright (2002, 76–92) discusses the fact/value dichotomy from the perspective of Wittgenstein's *Tractatus* and applies it to the thought of Schoenberg.

implication of evaluation" (2012, 7). We can unpack the music-theoretical and philosophical grounding of Babbitt's ethics by discussing this refusal to evaluate.

First, the music-theoretical: Babbitt, in comparing Schenker and Schoenberg, seems to locate the move from the descriptive to the evaluative in Schenker's polemics, saying that, "Schenker made an illicit, irrelevant leap from his analyses to his evaluations" ([1979] 2003, 373; see also pp. 193, 280, and 441). In discussing his experiences with Ernst Oster (1908–1977) and the American Schenkerians, Babbitt states:

> I was attempting to discover to what extent, if any, there was an awareness that the Schenkerian cosmos in all its manifestations rested on normative, but fruitful, circularity; lurking behind every analytic diegetic was an intimated disguised evaluative. The verbal components of the analyses are riddled with imperatives and prescriptives, and the very choice of instances rests ultimately on an illicit derivation of a "should" from an "is" or—given that the analyses are exegetic wakes—of a "should" from a "was…." Schenker's small number of allowed entrants into the pantheon… suggests an enthymemic leap over concealed criteria that are not inferable from his "counterexample" analysis of the Reger Variations and Fugue on a Theme of Bach and of a small portion of the Stravinsky Piano Concerto. ([1999] 2003, 480)

The bracketing—indeed, editorial excision—of Schenker's evaluations comprises, in part, the post-War Americanization of Schenker, but let us pause for a moment to discuss Babbitt's last example—the Schoenberg and Stravinsky analyses—a place where Schenker shifts from analysis in support of an evaluative conclusion to evaluation, eliding a premise. As Babbitt says elsewhere:

> I was never certain that I interpreted correctly his [Stravinsky's] silent reactions to the references to Schoenberg and him in Schenker's *Das Meisterwerk*, Volume 2. I showed him, at his request and as a result of a momentary aside in my Santa Fe talk, Schenker's critical analysis of those 15 1/2 measures from the *Piano Concerto*. He spent a few minutes

> inscrutably scanning the two pages of text and analytic sketch, then thumbed forward and—fortunately—backward through the article, where he discovered the excerpts from Schoenberg's *Harmonielehre*. He read Schenker's commentary, and then I thought I detected a glimmer of satisfaction: was it in that Schenker had criticized Stravinsky's music, but Schoenberg's harmony book? ([1971] 2003, 266)

Despite this, Schenker's ([1926] 1996, 12–8) critique in *Das Meisterwerk in der Musik*, Volume 2, seems to shift from consideration of what we might call the cognitive to the moral. Schoenberg doesn't understand passing motion: "Schoenberg has too little understanding of the passing notes which he attacks" (Schenker [1926] 1996, 16). Stravinsky, on the other hand, is incapable of doing good (musical) things: "The fact of life in general: that man is more often constrained to do bad things because he is incapable of doing good things" (Ibid., 17). Furthermore, "It is futile to masquerade all the inability to create tension by means of appropriate linear progressions as freedom, and to proclaim that nothing bad exists in music at all…. Stravinsky's way of writing is altogether bad, inartistic and unmusical" (Ibid., 18). This is a metaphorics of (failed) morality, not simply musical inability or failure of musical cognition, supported by musical (Schenker's own) analysis, which demonstrates the corrupted Stravinskian morality. Although Babbitt argues that Schenker moved inappropriately from is to ought in discussing single authors, Schenker's discussion is interesting here for it temporalizes the distinction across composers: the fact of Schoenberg's mental inability to the value of Stravinsky's moral failing.

The broad distinction traditionally originates in the philosophical literature in David Hume, in what is called the is/ought distinction or the fact/value dichotomy. Hume writes in an aside:

> I cannot forbear adding to these reasonings an observation, which may, perhaps, be found of some importance. In every system of morality, which I have hitherto met with, I have always remark'd, that the author proceeds for some time in the ordinary way of reasoning, and establishes the being of a God, or makes observations concerning human affairs; when of a sudden I am surpriz'd to find, that instead of the usual copulations and propositions, *is*, and *is not*, I meet with no proposition that is not connected with an *ought*, or an *ought not*. This change is imperceptible; but is, however, of the last consequence. For as this *ought*, or *ought not*, expresses some new relation or affirmation, 'tis necessary that it shou'd be observ'd and explain'd; and at the same time that a reason shou'd be given, for what seems altogether inconceivable, how this new relation can be a deduction from others, which are entirely different from it. But as authors do not commonly use this precaution, I shall presume to recommend it to the reader; and am perswaded, that this small attention wou'd subvert all the vulgar systems of morality, and let us see, that the distinction of vice and virtue is not founded merely on the relations of objects, nor is perceiv'd by reason. ([1737] 2000, §3.1.1, emphasis original)

The main notion is that it is an informal fallacy to derive an ought—a normative statement as to what should be—from an is—a statement regarding a fact in the world. As I type, it is nighttime. It would be a fallacy to assert then that it *should* be nighttime, merely given the fact that it *is*. This is a bald example, but as we have seen with Schenker, and as we can recall with many twentieth-century discussions of atonal, twelve-tone, and experimental musics, not far from the level of functioning of much musical discourse. The reason the "level" of discourse is fairly low, is because this is a distinction basic to modernism generally, and because it requires a certain presence of mind to prevent one's discourse from sliding from description of what is to prescription of what should be.

In attempting to locate causes for Babbitt's bracketing of the moral or ethical in musical discourse, I have suggested that the trappings or we might say failings of Schenker would be one reason—a negative example. Further, there is the bracketing of ethics in logical positivism, and we shall discuss the post-World

War II bracketing of ethics from scientific and academic discourse generally, in an attempt to prevent contention. But further, there is the appeal to the logical. As Babbitt says, "Naturally, since I am not concerned with normative allegations, I cannot be concerned here with the invocation of the overtone series as a 'natural' phenomenon, and that application of equivocation which then would label as 'unnatural' (in the sense, it would appear, of morally perverse) music which is not 'founded' on it" (Babbitt [1965] 2003, 197). To base a music-theoretical system upon principles somehow not based in nature—with nature understood in an historically normative sense—is to be *morally* suspect.[4] The move here equivocates on the notion of "natural" as between given by physics and given by Judeo-Christian mores.

As with many of the topics and approaches of logical positivism in the early twentieth century, Wittgenstein's *Tractatus-Logico Philosophicus* set much of the tone for discussions of ethics: "So too it is impossible for there to be propositions of ethics" ([1921] 1961, §6.42). This is because, per §6.41, as with the accidental and non-accidental, ethical propositions must lie outside the world, for if they were to lie inside the world, they would not be ethical propositions, they would be factual propositions, where ethical propositions, per §6.422, take on the form of laws for Wittgenstein. Given that, as per §6.421, "ethics and aesthetics are one," discussions of music, the arts, may be poetic but cannot be, in the normal understandings of music propagated by music criticism, the object of scientific knowledge. Underappreciated in this connection, I would argue, is Babbitt's achievement in making of musical understanding a science, this despite

[4] Maus 2004 further unpacks Babbitt's denaturalization of music theory as a queer move.

his knowledge that Carnap and other logical positivists, under the influence of Wittgenstein, would not have accepted study of music as a science, insofar as music is an art, unable to give forth verifiable propositions. Schlick summarizes the sentiment: "Foreign to us is the pride of those philosophers who hold the questions of ethics to be the most noble and elevated of questions just because they do not refer to the common *is* but concern the pure *ought*" ([1939] 1959, 259, emphasis original).

Boretz, in discussing critical as opposed to expository writing, more than evokes or applies, but rather analyzes how the move from the descriptive to the normative appears to support certain music-theoretical claims:

> Of course, all the same confusions arise [in critical discourse as in expository writing], but a particular one that seems to cause the widest range of problems is the familiar procession from the descriptive to the normative, from "is" to "ought," as, from "I cannot determine how this can be cognized as being in C major, so I don't know what to make of it as a musical structure," to "*this isn't in C major* and hence *is musically incoherent*," in which latter not only the compounded material implication but each of the italicized propositional components is a normative assertion disguised by grammar as an observational fact. More confusing still is the situation in which the definitionally crucial criterion is left unstated, as: "You may have shown how the piece *is organized*, but not how it *makes musical sense*." Here, the conditions under which the latter reservation would be withdrawn are unstated and seemingly inscrutable, and those justifying the affirmation of the antecedent seem equally elusive. A more subtle problem emerges from the obverse of this tendency: the *assumption* that all theoretical language *as used by others is purely normative*, and is thus to be understood as beyond all else *persuasive* in its implicit claim of coercive authority. (Boretz [1969] 1995, 16, emphasis original)

Of course, Boretz's example of C major is ironic, given that determining a piece's key—especially when "in" C major—is normally considered a fundamental musical skill. The reference could be to late-Romantic or atonal pieces, which

can present such difficulties, but it seems more likely to refer twelve-tone music, which mid-century presented the horizon of musical cognition under the sign of musical structure. Reading again, however, while I still think the situation Boretz describes was historically precipitated by the problematic of twelve-tone music (how to hear a twelve-tone piece *as* twelve-tone, hence structured, hence coherent, hence, in some sense, "good," or at least, not bad), nonetheless it is still imaginable that, as Boretz here describes it, he is referring implicitly to late-Romantic music, wherein one intuits, we might say, a tonal center, but rationing the music out in such a way as to demonstrate tonal connections, coherence, over larger spans becomes highly problematic.

Boretz here holds fast to the logical positivist distinction between fact and value, implying the only proper objects of scientific inquiry are facts. Musical discourse concerns, not values, which are the domain of the social sciences, but rather facts, which are the domain of the empirical sciences. Music theory is an empirical science, not one concerned with subjective observation reports, for example, nor surveys of group (in)abilities. But we can read a utopian gesture into Boretz's last move: his move to consider the logic by which music-theoretical discourse usually functions coercively, authoritatively. We can read *Meta-Variations*'s relativism here, where other authors project not so much the obligation, but rather the hope, to *not* impose their will power upon us, upon our hearings.

Part of the background for Babbitt and Boretz's dismissals of value judgments in music theory is the permeation and importance placed on value judgments in music criticism, the competing discourse, which Babbitt and Boretz were attempting to overcome, this despite their own earlier music criticism. We

can read Babbitt during the early stages of his career as implicitly writing against the composer/critic, that other, important option for the composer concerned with verbal communication. (Although from 1962 to 1970 Boretz wrote exceptional music criticism for *The Nation*, I do no think this is the kind of criticism Babbitt was writing against, as Boretz even here evinces a certain modernist fervor.) Indeed, we need not turn far into a book on the theory of musical criticism from 1966 to learn that judgment is the core act or faculty for the critic: "The practice of criticism boils down to one thing: making value judgments. The theory of criticism, therefore, boils down to one thing also: explaining them" (Walker 1966, xi). Interestingly, however, Walker still leaves room for a level of value-neutrality in the composition to audience process: "Means are precompositional; they are the concern of the composer. The critic's concern on the other hand, is the creative result. We put the cart before the horse when we censure a composer for employing a technique which, for one reason or another, we happen to dislike. By itself, a technique is neither good nor bad. It is incapable of receiving censure until it has fulfilled itself in a creative result" (Ibid., 8). Recall Partch's problematization of the precompositional and compositional levels from Chapter Two of this dissertation. On the one hand, Walker's argument shows an absorption of theory into the music-critical imagination of the creative act: means, precomposition, technique, which he believes cannot be judged: they are value-neutral formalisms. On the other hand, Walker simply shifts the fact/value dichotomy to a different level or stage in the transmission process, that of the "creative result."

As is generally well-known in music theory circles, Babbitt shared a Cold-War concern for science as value free with the logical positivists who had

immigrated to the United States. As Reisch (2005, 353–64) discusses, logical positivism effected a similar purging of evaluative discourse—specifically its pre-War Marxism—in the U.S.A. after the War, the relevant context being the McCarthy hearings. Reisch (Ibid., 355) credits Hans Reichenbach's popular 1951 discussion of scientific philosophy with sounding the death knell for ethics—and politics—in logical positivism: as Reichenbach says, "The modern analysis of knowledge makes a cognitive ethics impossible: knowledge does not include any normative parts and therefore does not lend itself to an interpretation of ethics. The ethico-cognitive parallelism renders ethics a bad service: if it could be carried through, if virtue were knowledge, ethical rules would be deprived of their imperative character" (Reichenbach 1951, 277). "The consensus within the profession [of philosophy of science in the U.S.A. during the 1950's]… was that logical empiricism was apolitical and not concerned with problems and questions about values" (Reisch 2005, 353). Throughout this dissertation I have pointed to the construction of axiomatic systems as central to the task of Princeton Theory in its high-modernist moment. A proper music-theoretical system contains no premises, axioms, or definitions which make value judgments, they concern solely the *is* not the *ought*.

That Babbitt and other Princeton Theorists in their high-modernist moment sought to bracket aesthetic judgments from music-theoretical discourse—that we should be unconcerned with musical *oughts* or what *should* be, but rather the musical *is* or *could* be—puts us in mind of Alexander Rehding's reading of similar ethical issues in Hugo Riemann:

> The central question for Riemann's harmonic dualism, as we shall see, was not so much about how we *do* hear music. Rather… he exhibited a utopian concern with how we *ought* to hear music, and conversely, he argues that musical compositions ought to comply with harmonic dualism, even though the existing repertoire does not do so, or does so only partly. On this level, Riemann's musical thought touches aspects that merge epistemological and cognitive concerns with aesthetic ones: his musical thought becomes an aesthetic yardstick for past composers and an ethical guideline for composers of the present and the future. This implicit "ought"—in other words, the relentless normativity of Riemann's musical thought—is simply the flipside of his systematic and essentializing approach to music. (2003, 9)

The obvious question: was Babbitt concerned with how we do or ought to hear music? For Babbitt rarely seems to make appeals or concessions to how we already do hear music, but rather, as discussed in Chapter Three, appeals to the subjunctive, to that which could be learned to be heard. Indeed, the oral history of Babbitt's composition lessons tells us that they were steadfastly non-normative: students not only studied with more than one composition professor at Princeton, but even then, Babbitt never encouraged students to compose specifically twelve-tone music. Further, as Kerman (1985, 96) admits, there was in Babbitt's world a relativism, an understanding that a given music-compositional move was not right or wrong on its own terms—naturally—but rather was more or less appropriate for the specific effect desired, and given the local and global context of the piece. Babbitt's denaturalization of music theory, then, can be understood as presenting a decidedly non-normative framework for musical discourse. While I think Babbitt in no way essentializes music, nonetheless he was unable to bracket completely evaluative discourse from his discourse. The motion to bracket music criticism's purple prose is itself relentlessly normative. Babbitt is ethical despite himself. For to argue against

normative claims where they do not "belong" is itself an ethical position. The fact of a fact/value dichotomy is itself a value.

Putnam historicizes and analyzes the point that the insistence of a distinction between is and ought is itself a moral as much as a logical position: "One clue that the claim presupposes a substantial metaphysics (as opposed to being simply a logical point) is that no one, including Hume himself, ever takes it as merely a claim about the validity of certain forms of inference, analogous to the claim 'you cannot infer 'p&q' from 'p or q'" (2002, 14). The fact/value dichotomy assumes a distinction between the normative judgments of moral or ethical values and those of epistemic values. But such epistemic, "judgments of 'coherence,' 'plausibility,' 'reasonableness,' 'simplicity…' are all normative judgments… of 'what ought to be' in the case of reasoning." Therefore, "epistemic values are values too" (Ibid., 31). Putnam calls this, "the entanglement of fact and value" (Ibid., 28–45), and Carl Dahlhaus uses the same language (in translation) to offer an historicization within art: "Reflecting on art and morals, one is entangled in the dialectics that the decision to exclude morality from the debate on art is in itself a moral decision" ([1970] 1983, 18). Dahlhaus traces the distinction between art and morality to a nineteenth-century, art for art's sake misinterpretation of Kant, whereby the disinterested judgment of taste was conflated with a lack of interest in art's moral implications. From here, also the nineteenth-century tradition of music criticism's exclusion of discourse about the "mechanics" of music led in the twentieth century to the sole concern, within modernist music-theoretical discourse, with musical "structure" (Ibid., 17–8). Although "structure" carries a freighted discursive and ideological

history, as a symbol for Babbitt's concerns, "structure" appears here as value-free, a defining position for high modernism generally.

What is more, in the early twentieth century music criticism and theory derogated new possibilities of musical structure or composing because of a conservative and reactionary attitude: the new ways were not the old. In Babbitt, this encourages, as stated, an epistemological hygiene, wherein all the former assumptions regarding musical coherence, structure, and generation will be laid bare and challenged. In this process, musical values are made overt; we can only understand one another's musical worlds after achieving clarity regarding each's foundations and implications.

In order to move forward with the New Musicological critique of Princeton Theory, let us consider the question: whence comes the request for ethics or discussion of ethics within a music-theoretical discourse? It appears to be the case that formalism brackets the ethical as a social concern. Consider, again, McClary ([1989] 1993, 65–6) which argues that Babbitt's *Philomel* (1964) for soprano, recorded soprano, and synthesized sound, *can* be read as presenting an anti-rape message, but that because of Babbitt's formalist discourse, we are discouraged from hearing any message at all in the music. The way for music-theoretical discourse to be ethical, then, is to *not* be music-theoretical discourse; it is to move from formalism to culture (via some form of hermeneutics).

But for Babbitt, to attribute cultural encodings to musical formalisms would have been intellectually and morally suspect, for in the mid-1930's he had experienced discussions of twelve-tone music which argued whether the row was fascistic or democratic. Troping Schoenberg ([1947] 1975), which discusses political metaphors in the space of twelve-tone music, Babbitt asks, "'Was it or

was it not "democratic?"' After all, since all twelve pitch classes were permitted and included in the series—the referential norm of such a work—the self-declared champions announced that, therefore, 'all the notes were created free and equal,' 'one note, one vote'; but there were those who demurred and declared the music, the 'system' fascistic, since it imposed an 'order,' and each work imposed 'a new order' upon the pitch classes" (Babbitt [1991] 2003, 443). We can read Babbitt's perturbation with the intellectually suspect transfer of political metaphors into musical structures. The real import of Babbitt's criticism, however, arrives a couple of sentences later, when he says, "It is a particularly distasteful reminder that in those countries which proclaimed themselves 'socialist,' music which they labeled—accurately or otherwise—serial, atonal, or twelve-tone was denounced and banned as 'bourgeois modernism,' 'imperialist formalism,' or… 'degenerate Jewish music'" (Ibid.). Thus formalism and the bracketing of values in relation to musical facts was itself an ethical move for Babbitt, for it appeared to present a means of preservation. If music could escape such literally deadly categories, then perhaps so could its practitioners. (See Brody 1993, 173–83.)

Jean-Jacques Nattiez reads Babbitt as having shifted from the descriptive to the normative in Babbitt's own meta-theorization of serial practices:

> When Milton Babbitt ([1965] 2003) defines a musical theory as a hypothetical-deductive [sic] system, one might think that he is operating in strict conformity with the epistemological exigencies of logical empiricism. But if we look closely at what he says, we quickly realize that the theory *also* seeks to legitimize a music yet to come; that is, that it is also normative. Such a model cannot account for certain sorts of music (some types of electro-acoustic music, for instance). And there is a danger that in transforming the *value* of the theory into an aesthetic *norm* (by means of a subtle shift), one utterly denies certain musical genres their right to exist.

> From an anthropological standpoint, that is a risk that is difficult to countenance. ([1987] 1990, 167, emphasis original)

I admit I am uncertain what to make of this. How would Babbitt's proposal of a given hypothetico-deductive system, such as presented in music theory, deny a genre its right to exist? Bracketing the anthropomorphization, Nattiez says that Babbitt, "transform[s] the *value* of the theory into an aesthetic *norm*," but he has neither demonstrated this shift in Babbitt's discourse nor shown that theory had certain values. The ideologial matter of canon-inclusion or simply piece-creation is different than theory construction. For my entire training in Princeton Theory has taught me to think that although Babbitt was certainly trying to legitimize atonal and serial musics, he also would accept nearly any other form of music (with the possible exception of minimalism and Neo-Romanticism). Clearly Babbitt was aware of the slippage between is and ought which Hume diagnosed and which Nattiez here evokes. It seems that what Nattiez misses here is the music-theoretical plurality for which Babbitt and Princeton Theory would argue, and which we have discussed. Serial theory was never the norm for music theory; Babbitt had all the respect in the world for the tonal "system." Electro-acoustic pieces would give rise to their own systems, which Babbitt might prefer to be expressed in axiomatic form, but remember his dissertation does not so express, and recall too, during Chapter Three, the many types of things a theory can be, ways it can be expressed, goals it can achieve. Even Kerman (1985, 96) could admit that Babbitt countenanced *no* norms, no universals in music theory, other than that music, in its various forms, is systematically explicable. Again, even with minimalism, do we really think Babbitt would have denied composers their "right" to compose in this manner? It seems that Nattiez is here accusing

Babbitt of a culturally imperialist position occasioned by faulty logic. The problem is that this accusation seems supported by nothing in Babbitt's discourse. We still cannot presume that Babbitt was an amoral composer/theorist.

3. *Ethics of Discourse and Music*

As suggested in Chapter One, the critiques leveled by Brown and Dempster (1989) can be read as having ended Princeton Theory—at least in the imaginations of normal music theory. Boretz's ([1989] 2003) quasi-response barely controls its rage, offering explicitly ethical claims in defense of Princeton Theory. After diagnosing the displacement of a "tribal-ritual experience-code" by "self-conscious meta-musical discourse" (Ibid., 272), Boretz states that, "A 'music theory' emergent within this subculture [of academia] will perforce be prescriptive, making claims of right thinking, right methodology, and presumptive universal intradisciplinary hegemony…. Within such an institutionalized enclosure it is not perhaps even discriminable that there might be other music-ontological commitments than its own" (Ibid., 273). Boretz then designates one group the "institutionalizers" and another the "contextualizers" (Ibid., 274).

> In fact, I perceive that an "institutionalizer" is likely to read a "contextualizer's" thoughts as a fascist would read an anarchist's: the ontological assumption (social organization consists of an ordering based on relative power) implicates objectives (a program for position within that society) which automatically locks in issues of strategy, and

> prescribes a certain intention as to the ordering, formulation, and purpose of each proposal, analysis, observation, and thought-sequence in that text (persuasion, enforcement, appropriation of the authority of the true orthodoxy are invariant ploys; and steeltrap consistency, irrefutable authority, and ultimate universal prescriptive force and effect are inevitably being sought, or implicitly even being claimed). (Ibid., 274–75)

These are damning lines of thought, for they compare persuasively normal music-theoretical discourse—indeed, Princeton Theory in its high-modernist moment, we might argue—and its sociality to fascism, a form of social organization we cannot consider ethical. They situate Boretz's own work—and those of the authors of the Turn—as anarchists and ritual-producing creators (composers) of musical being. Dramatic lines of thought, but perhaps for that reason we should attend to them. They clearly show an ethical concern on the part of Boretz, making stronger claims than Brown and Dempster's positivist concerns to critique and adjust music theory to become a better science.

Boretz ([1993] 2003 and [1999] 2003) has elsewhere discussed the ethics of communication: metaphor seems to be the key to maintaining an ethical stance, translating something (absolute music, the music itself) from its proper domain into another (verbal discourse),[5] by not allowing the discourse to match or track too closely, too deeply, the musical phenomena. Close but not touching, a kind of energy work or field surrounding: the music and discourse's energies "touch"

[5] To my knowledge Boretz never uses "absolute music" nor "the music itself," instead using simply "music," "music, as a music" or the negation (music "with no names"), I think not using the former pair in an attempt to divorce his (and Babbitt's) explicitly Americanist discourse from the German canon. After all, "it is in the American spirit of freedom and independence that the journal [*Perspectives of New Music*] was founded and through which its [*sic*] remained pluralistic and forward-thinking" (Graber 1995, 55). See also, Sessions ([1945] 1979), Babbitt ([1954] 2003) and ([1989] 2003), Berger and Boretz ([1987] 2003, 244) and Boretz ([1990] 2003).

each other's energies, but their skins do not meet. Works are identified with their authors, for Boretz, again as a kind of ethical stance: composers invest (literally and metaphorically) heavily in their music, so to treat pieces with anything other than the requisite concern, care, is to violate a kind of assumed ethical position. To critique is to risk critique in turn. Music as expressive utterance is Boretz's latest move along these lines: we compose, write, because of a deep-seated, originary need to express ourselves musically (Boretz 2008; see also Boretz [1982] 2003). Boretz wants to respect this need and individuality by respecting experiences without names: music as he experiences it (Boretz [1993] 2003).

Although I have worked toward recuperating an ethics for Boretz, at times he can seem *un*concerned with the status of others—their compositions, discourse.

> One thing about a book that both John [Rahn] and I like a lot, Deleuze and Guattari's *A Thousand Plateaus*, is that it cites enormous quantities and varieties of texts, but always in contexts and with surrounding language which recontextualizes them so radically that there is no feedback to the texts themselves, to threaten them with inflation, invasion, or re-interpretation; so they're left still speaking their own voices, intensely "used" but not reconfigured (—disfigured, as it must always be). And John nails it down for us right away: (John's text, first sentence:) "Music theory, like any discipline or science, is a process of discourse." So—implicitly—we're responsible to a discourse which we co-opt for our own discourse. If this is about morality, or ethics, or virtue, or etiquette, ok. But how people receive things, and how they accept them or not, are critical qualities of *their* world-processing, and the output of that into "the" world—ugly, nice, precise, gross, fair, foul, whatever. The authentic motivation to accept a music discourse or a theory about music is about the same as for a music: its "truth" (as I've said before) is the truth of an individual experience at a particular moment, to which you're being given access, in a very controlled way. (Boretz [2000] 2003, 469)

Boretz appears to be trivializing "morality, or ethics, or virtue, or etiquette," by emphasizing the individual musician's response (to music, discourse). For in Boretz's reading of Deleuze and Guattari, to lose touch with the original author within one's own discourse—to absorb to the point of loss of ownership—is the preferred option of engaging with others and their texts. Might this express the opposite of a respect for the original author? If it does express respect, however, it appears to do so by treating the original author as insulated, beyond interaction, precisely the opposite of Brody's reading of Babbitt's ethics, as discussed earlier.

Undoubtedly, however, a moral force exists in Boretz's rhetoric. Nattiez suggests that Boretz, in *Meta-Variations*, confuses, "his own formal, logical model with an immanent essence he then *ascribes* to the music. He transmutes the virtue of logic into the formal 'nature' of music" ([1987] 1990, 166–67, emphasis original). Boretz, I believe in response, uses Nattiez's language in theorizing the difference between a moral or ethical discourse—the descriptive—and an amoral discourse—the ascriptive—in relation to music:

> I want to think of the discourse-action-relational transaction as operating in two complementary directions, which I want to call *descriptive* and *ascriptive*, respectively. The ontological implications of both are formidable, but opposite to one another: in the *descriptive* use-mode, a discourse flow and a music flow are held in apart from one another, in a mutually metaphorical relation: each with its distinct integral time-evolving ontological autonomy, strenuously forced into ongoing energized relational confrontation, strenuously constrained from collapsing or merging into one another, the force field between them exuding an awareness-content which is ontologically enriching or expansive or both; but the instant the ontological barrier crumbles, or even stabilizes, the moment one text denotes or defines or otherwise accounts for the other, an ontological transference occurs, the transaction becomes static and reductive, ontologically substitutive rather than ontologically

> specificative and expansive: that is the *ascriptive* mode. (Boretz [1993] 2003, 351)

In using language like "formidable," "strenuously forced" and " strenuously constrained," in reaching an apex at its midpoint on the utopian notion of a music-discourse, "which is ontologically enriching or expansive or both," Boretz asserts a kind of morality for the commentator on music. We know this moral in part by its subsequent negation, the possibility it will fail to keep music and discourse, "strenuously constrained from collapsing or merging into one another." The failure presents itself as what normal music theory might take as an achievement: the denoting, defining, or accounting for music and music-texts. But for Boretz these achievements imply a bad faith: they are static and reductive, terms of abuse. Boretz desires and guides us toward a discourse which he considers ethical in the sense of specifying or expanding musical awareness and being, but not substitutive for musical being. I read this as code for the discourse of the composer/theorist, one who specifies musical configurations or expands musical being by creating new musics, musical worlds, or hearings of pieces, all vivid, ever tumbling forward.

Rahn ([1993] 2001, 25) furthers the comparison between works and people, outlining their limits: "Works of art, like people, are never adequately represented." Further,

> An artist puts herself on the line with every new work, exposing herself to the world. The dimensions of the creative act are at once intimately personal—this is *me* out there—and intensely, inevitably involved with ideologies, religions, metaphysics, politics, matters that constitute a dangerous arena in which to present oneself naked…. We read the person in the actions as represented by the form, and the form is so intricate that its representation of the person is both deep and relatively complete, more

> complete than any normal social interaction could provide. (1994, 1–2, emphasis original)

"This is *me* out there." Works are here identified with their composers, we thus have an ethical or moral responsibility to works, in our theories, our discourses. Pieces, for example, should be unique, as should people. Thus a humanist or liberal moment lies within Princeton Theory.

In a note to the title page of *Compose Yourself*, Randall states the following: "Concerning extramusical behavior, the composer Al Daniels once asked me an interesting rhetorical question: 'What code could I need, or even have any use for, that didn't arise directly from the activity of composing?' (That was thirteen years ago.) What follows is a beginning" (Randall [1970] 1995, 1). Thus we are to read *Compose Yourself* as motioning toward an answer to the preceding rhetorical question. *Compose Yourself* can thus be read as a moral tale: a search for a code of conduct as a composer which did *not* arise directly from the activity of composing itself. This is a bizarre stance for a work entitled *Compose Yourself*. We would think that the work would arise directly from composing, and feedback into composing. Implicit in the work, and especially in its last section, however, is a critique of the music-compositional tradition's ability to provide codes of conduct for the composer. Needed is a motion outward, to baseball, for example. Perhaps, too, it illustrates Randall's dissatisfaction with the moral implications of formalism, of Princeton Theory before the Turn.

After the Turn, Randall problematized the traditional composer-audience relationship, calling into question its ethics, and asserting that his legendary two-person sessions in his cellar were non-hierarchical, non-egoistical. Randall does not like to refer to the musical sessions as "improvisatory," because that for him

implies a competition which replicates the composer-audience relation. Important too is the spatiality of the concert hall, where "they out there" will consume the piece, versus the intimacy of Randall's cellar, within the home, yet a space apart.[6] I would like to attend, too, to Randall's discussion of the act of communication, but not to simply anyone, nor the "jerks," but to those who might understand, with concern.

> I began to see the extent to which in fact composing is a question of putting together this thing that will establish you as somethin' special and will earn plaudits from audiences and that's what it's all about. You're trying to write this piece that they out there will take in all right and then with the kicker that to me, as to most other composers, you have no high regard for the discrimination of the people out there that they're gonna [claps with hands] do this. It's just that that's what you're doing it for. So it began to strike me more and more, "wait a minute, if I want to feel that I am communicating something of value to people that I value, not just astounding the jerks, well then the whole set-up where I do it and you take it in is not the obvious choice. More obvious is to try to get a communication going." It was on that basis that I started going to the cellar… usually with one other person and unscripted stuff. We would just, [indecipherable] the understanding with which we would do this was, I've always described as ethical and social, namely you gotta listen, you gotta keep listening, you regard everything that happens, just the way you'd regard anything that you put out—that's where it is, that's what we've got—and sort of understood to be *verboten* was [to] start showing off the licks that you can play on your instrument or anything like that. (2011, disc 3, c. 19:00)

Randall here places in close proximity the ethical and social with listening: perhaps by listening, continuing to listen, and by shunning our egos via our

[6] Striking then is Babbitt's ([1970] 2003, 260) estimation that, "The university… provides us [composers] with a community, a select community of colleagues, rather than competitors." Given that around this time Randall was engaged in what we are calling the Turn, it appears that the university had become for him a field of competition, not collaboration. The ideal, *Gemeinschaft* (community), not *Gesellschaft* (society).

technique, we might communicate, we might undergo, become, something—presumably, somehow, better.

We know what these sessions sounded like (or at least many of them), because documentation and reflection via recording was an important aspect of the entire experience. Boretz and Randall released during the 1980's a series of cassette tapes of these sessions under the title INTER/PLAY. Rather than address these myself,[7] I would like here to reproduce sections of Robert Paredes' (1948–2005) discussion of his own sessions with Benjamin Boretz as a kind of remembrance, because they problematize the athletic, "lick-machine" of self imposing itself on a group, as "somethin' special," and because they heighten the intimacy of these settings. I could have chosen Paredes' words at random, so beautiful are they, reflecting a life with "improvised" (for want of a better word) settings:

> To begin with, how *are* we *together* in this situation? What, other than blowing the same notes at the same time—and with the same intensity—allows us to establish a palpable connection within and between (or, at the very least, to satisfy ourselves that one has occurred)? …*Today, in my living room, I respond to these memories of Ben's performance with the playing of an air-only sound: a slack-jaw, chalumeau-register, pitch-class G in which the barest hint of pitch-presence is shadowed in the air's ontology. I imagine this touch of barely perceptible pitch-matter as at least a possible description of Ben's potentially elucidative presence/non-presence*…. (Paredes 2005–2006, 272, emphasis original)

This is, of course, a utopian space, about which I am constitutionally skeptical, and yet patiently expectant. Aware as Paredes was of his own tendency to

[7] See the end of Chapter Two of this dissertation for an improvisatory, experimental reading of Randall's *Compose Yourself*. Hibbard (1985) offers an experimental analysis of INTER/PLAY session "TWO (no. 8)," released on Open Space CD 5, also referred to in Chapter Two of this dissertation.

impose himself in an improvisational setting (Ibid., 270–72), he speaks here of collaboration, of group togetherness in the context of improvisational music-making. (Recall Brody's discussion of Arendt's notion of togetherness.) To what end? To the end of recovering or at least establishing of an authentic existence. Forgiveness, respect, mutual concern: utopian, to be sure, but also a vision of morality, personal and social, open in principle to all who would just take the time, to listen. Crucial too here is memory, which promises the future.

As Boretz has said, in a private communication, "In life, as in music, time and taking time is the indispensable resource, the real human meaning of the art and the practice in its most generic form. Taking time, taking care, taking, even, pains to get it right and to 'get somewhere' with it—the pragmatics of imagination, in fact." *This* is a composerly ethics—the imaginative act, in life and music, inflected with time and care. It is strikingly evocative of Heidegger's notions of taking time as part of the vulgar (*vulgären*) conception of time (the Aristotelian conception as discussed in Chapter Two), and of conscience as inflected through a temporality of care (*Sorge*), the latter which unites past (being already thrown into the world), present (the ecstatic character of Dasein in relation to others), and future (Dasein's continual openness to possibilities) (Heidegger [1927b] 2010, §79; King 2001, 36–7). While Heidegger considers "taking time" a vulgar conception of time which he is in the process of overcoming, he does discuss taking time into the reckoning of Dasein's interpretation of being. "Everyday Dasein taking time initially finds time in things at hand [*Zuhandenen*] and objectively present [*Vorhandenen*] encountered within the world. It understands time thus 'experienced' in the horizon of the understanding of being that is closest to it, that is, as something that is itself

somehow present [*Vorhandenes*]" (Heidegger [1927b] 2010, §78). Presence-to-hand (*Vorhandenheit*) is a theoretical stance which regards objects as objects as against the experiencing subject, anterior to use or readiness-to-hand (*Zuhandenheit*) (Schalow and Denker 2010, *s.v.* presence-at-hand, readiness-to-hand). Although Heidegger downgrades the vulgar conception of time in relation to the primordial conception he has set out to disclose, I think that Boretz articulates such a deeper conception of temporality as care, the self immersed in the duration of time as care, as Boretz said, "the indispensable resource." As Heidegger says, "*Temporality is the primordial, 'outside of itself' in and for itself*. Thus we call the phenomena of future, having-been, and present the *ecstasies* of temporality" ([1927b] 2010, §65, emphasis original). Further, "*The primordial unity of the structure of care lies in temporality*." (Ibid., emphasis original) As stated, care unites past, present, and future. Further, temporality and thus care are always intended, directed to the world and others, a caring *for*, ecstatic, stepping outside of one's self. In caring for the other, I constitute my self (Ibid., §64). Dasein's essential existence as being is *care*, and Dasein's meaning is *time* (Schalow and Denker 2010, *s.v.* time; King 2001, 36). It is only through caring that being *has* being (King 2001, 97). As stated in Chapter Two, after the Turn Boretz especially concerns himself with ontological issues surrounding (discourse about) music, and it is in this context that he discloses a temporal, primordial ethics of care for the self as Dasein, other, world—life—and music as fundamental, ontologically creative acts.

Having discussed the ethics of the musical practices after the Turn, we should inquire as to the ethical status of the Turn itself, and its relation to the preceding high-modernism practiced by the Princeton Theorists, for we are given

every indication that the Turn was not merely an intellectual but rather a social phenomenon, and as such implied a kind of ethics, a concern for the other. (Again, see Chapter Two.) While Babbitt seemed to reject the larger public for sociological and political reasons, if not exactly ethical reasons, the authors of the Turn sought to embrace initially a broader sociality than that of Babbitt's academic vision. However, subsequent to this broadening the authors of the Turn, having rejected the normal routes of prestige, funding, and academic societies (The Society for Music Theory has never been an especially hospitable place for these authors), we find a subsequent constricting motion—into Randall's cellar, for example. The Randall-Boretz axis, although attempting a broader sociality than Babbitt, is actually more circumscribed. It is therefore ironic that Babbitt—who supposedly disdained the general public—made further inroads with that public than the authors of the Turn—who supposedly embraced a more egalitarian public.

4. Lewin and Authentic Analysis

Returning to a point made in Chapter Four regarding Lewin's virtual debate with Nicholas Cook, I would like to discuss in greater detail Lewin's evocation of Rilke, the utopian gesture in his image of the goals of artistic production and music-theoretical discourse, and, therefore, the implicit image of what a music theorist *should*, ethically, *do*; the kind of (music-theoretical) lives we should be living; notions of authentic and inauthentic living. I quote Lewin at length:

> Still, I find all these dissatisfactions regarding the ways Cook uses technical concepts and symbols to be relatively minor annoyances. Many of them could be eliminated, without substantially changing Cook's reportage, by a more concentrated and careful discourse. There remain more general dissatisfactions with Cook's approach, and these disturb me more. They arise from the notion, implicit within much of Cook's discourse and explicit in some of it, that we can afford to bypass any special effort to focus our ears on things about the piece that might not lie at hand from out previous musical training and experiences. I am disturbed because the most crucial critical demand I make upon my experience of an artwork is that it make me undergo again Rilke's experience before the torso of Apollo: "Du mußt dich ändern." [sic] The quality of the conviction, not its intensity, or extent, is the crux of the matter; if the world is not in some way sensibly different as a result of the artistic deed, then I do not see in what sense one can say a work of art has transpired. In reading Cook's story of the piece [Stockhausen's *Klavierstück III*], I get too much of the message, "Du mußt dich nicht ändern." I get the message that I can be perfectly at home with my listening if only I listen in a common-sense fashion for contours and registers and densities, and apply to those experiences some casual inferences from received notions about arch shapes, upbeats, etc. In this way I will hear that (and how) Stockhausen's piece, except for quirks in its notation, is quite traditional and comfortable; it will not challenge me, or provoke me, or in some ways infuriate me. ([1993] 2007, 61–2)

While Lewin continues, I would like to pause here to retrace where we have been. We could read a kind of positivist or analytic ethics into Lewin's concern for "a more concentrated and careful discourse," but this is a minor point for Lewin, a perhaps necessary but insufficient condition for ethical music-theoretical discourse. In fact, it emerges that while Lewin would prefer a certain carefulness in his discourse (which presumably means no elided clauses or ideas in the progression of an argument or description), actually Lewin prefers a musical and theoretical experience that throws caution to the wind. Lewin values effort, effort to extend our hearings, our aural abilities in ways that are not, in fact, ready-to-hand.

Lewin next conflates his expectations for music-theoretical discourse with his expectations for artworks in general: he misquotes Rilke's experience before the remnant of the statue of Apollo, which effected a change in Rilke as a human being, on some *ur*-level below personality, at the level of Rilke's soul: Rilke's original imperative reads, "Du mußt dein Leben ändern." Music, and by conflation, music theory, should do this to us too, for Lewin. In Berthold Hoeckner's (2002, 14) reading, "The final sentence—'You must change your life'—appears to break forth with great force, not from the speaker's self-admonishment (as one would normally read it), but as if issued from the mouthless torso itself." Further, not simply one's self, but the world should have changed, tangibly, after such an encounter. The world here seems dependent upon the self, but this is not the high-modernist model of world-creation we have discussed previously. Rather, this is a world not created explicitly, but rather implicitly, by the self, the ego, who has just now undergone a radical shift. If the self and world fail to produce a sensible difference—one perceivable and felt via the senses—then a work of art has not elapsed before our eyes, ears, before our entire beings.

But let us remember that Lewin's is not solely a utopian gesture; it is also a warning, via negative example, of what a musical life lived in vain would be like. In the situation of music that has the potential to change us and the world but which we are inadequate to allow or enable, Lewin evokes the quest narrative, and uses the standard locution, "perfectly at home." Home, here, is in fact *unheimlich*, it surrounds a false consciousness, is comfortable, Bourgeois. Tumbling forward from here in Lewin's rhetoric, the man (!) of action, the imaginative listener who changes his life, embarks out into the world, challenges

his own past, his music-theoretical tradition, his own life. Lewin's controlled rage bursts forth in the last quoted words, "or in some ways infuriate me," which literally refer to Stockhausen's music, but almost explicitly to Cook's lack of radicalness as an analyst, his inability to leave the home, be changed in his soul by music, have his world reordered by his encounter with music, to grasp this terrifying, ecstatic moment, control it, wrestle it to the ground, and channel it back into his own hearings of music, his understanding of musical details, music history, and the future.

Lewin thus demands of authentic music-theoretical listening and experience that it model itself on Beethoven's Third Symphony.

> Almost more important, however, is the *type* of *Idee* that Marx and others ascribe to Beethoven's music, for it invokes nothing less than the highest values of their age, those of freedom and self-determination, as well as the decidedly human (as opposed to godlike or demigodlike) nature of the heroic type. The trajectory of a work like the first movement of the *Eroica* is typically characterized as a spiral process in which a human hero goes forth (outwardly and inwardly), suffers a crisis of consciousness, and returns enriched and renewed. (Burnham 1995, 24, emphasis original)

Lewin, via Rilke, sees in Apollo's remnant a vision of *human* betterment. This, "quest plot, or hero's journey… carries significant mythic and ethical force" (Ibid., 25). Lewin inherits a post-Beethovenian model of music-theoretical moral and personal development, holds other musicians to this standard, as a kind of obvious yet explicable moral standard, and adjudicates failures. We fail, as people, when we fail as musical hearers. We succeed, as people, when we succeed as musicians.

Recall the plenary debate between Allen Forte and Joseph Dubiel, discussed in Chapter Three. There I read the debate as primarily differentiating

Yale from Princeton Theory, respectively, on the terrain of experience and conception in music theory. For Dubiel a changed experience presents a change in theorizing—and, as we have discussed, for Lewin too. For Lewin a changed experience means a changed person—no change, no morality, therefore amoral: Cook. Forte appears, in his debate with Dubiel, almost non-moral, in the sense that the concept-formation he enacts via music does not change his experience of music, therefore the concept-formation he enacts via music does not change his (musical) life (or, life with music). As Forte says, "it is not basically a didactic endeavor" (2000a, ¶1.5). *That* is a positivist position. Only positivists believe positivists do not exist.

Perhaps the fetishization of the composer in Princeton Theory—as we have witnessed on nearly every page of this dissertation—is most fundamentally concerned with the proper musical *person* one is supposed to be, should be: to be musically ethical is to be a composer. A composer creates her own musical world, inhabits it; Turns as a moral move upon learning that her musical world had been, perhaps, an amoral one; engages with musical experience, discourse, and other music(al) people in a manner that fundamentally changes her life, this despite the motion inward to the solipsistic. To become more of oneself as a result of an encounter with a musical other, as problematic as that may be, is the reason for music-theoretical discourse in the Princeton tradition.

References

Adorno, Theodor W. [1938] 2002. "On the Fetish-Character in Music and the Regression of Musical Listening." In, *Essays on Music*. Ed. by Richard Leppert, trans. by Susan Gillespie. Berkeley: University of California Press, 288–317.

———. [1949] 2006. *Philosophy of New Music*. Trans. by Robert Hullot-Kentor. Minneapolis: University of Minnesota Press.

———. 1965–1966. "Richard Straus." *Perspectives of New Music* 4/1–2: 14–32; 113–29.

———. [1967] 1976. "Introduction." In, *The Positivist Dispute in German Sociology*. Trans. by Glyn Adey and David Frisby. New York: Harper & Row.

———. [1969] 2002. "On the Problem of Musical Analysis." In, *Essays on Music*. Trans. by Max Paddison and Richard Leppert, ed. Berkeley: University of California Press, 162–80.

———. [1970] 1997. *Aesthetic Theory*. Trans. and ed. by Robert Hullot-Kentor. Minneapolis: University of Minnesota Press.

Agawu, Kofi. 2008. *Music as Discourse: Semiotic Adventures in Romantic Music*. New York: Oxford University Press.

Alphonce, Bo. 1988. "Review of David Lewin, *Generalized Musical Intervals and Transformations*." *Intégral* vol. 2: 161–78.

Apostel, Leo. 1960. "Towards the Formal Study of Models in the Non-Formal Sciences." *Synthese* 12/2–3: 125–61.

Arendt, Hannah. 1958. *The Human Condition*. Chicago: The University of Chicago Press.

Aristotle. 1969. *Physics*. Trans. by Hippocrates G. Apostle. Ginnell, IA: The Peripatetic Press.

———. 1981. *Posterior Analytics*. Trans. by Hippocrates G. Apostle. Ginnell, IA: The Peripatetic Press.

———. 2011. *Problems: Books 1–19*. Ed. and trans. by Robert Mayhew. Cambridge, MA: Harvard University Press.

Ayer, A. J. [1936] 1952. *Language, Truth, and Logic*. 2nd ed. New York: Dover Publications, Inc.

———. [1936–1937] 1959. "Verification and Experience." In, *Logical Positivism*. A. J. Ayer, ed. Glencoe, Illinois: The Free Press, 228–43.

———. 1946–1947. "Phenomenalism." *Proceedings of the Aristotelian Society* vol. 47: 163–96.

———. 1959. "Editor's Introduction." In, *Logical Positivism*. A. J. Ayer, ed. Glencoe, Illinois: The Free Press, 3–28.

———. 1982. *Philosophy in the Twentieth Century*. New York: Random House.

Babbitt, Milton. [1946] 1992. "The Function of Set Structure in the Twelve-Tone System." Ph.D. dissertation, Princeton University.

———. [1949] 2003. "The String Quartets of Bartók." In, *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 1–9.

———. [1950] 2003. "Review of *Schoenberg et son école* and *Qu'est ce que la musique de douze sons?* by René Leibowitz." In, *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 10–15.

———. [1952] 2003. "Review of Salzer, *Structural Hearing*." In, *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 22–30.

———. [1954] 2003. "Musical America's Several Generations." In, *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 34–7.

———. [1955] 2003. "Some Aspects of Twelve-Tone Compostion." In, *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 38–47.

———. [1958] 2003. "The Composer as Specialist." In, *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 48–54.

———. [1960] 2003. "The Revolution in Sound: Electronic Music." In, *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 70–7.

———. [1961a] 2003. “Past and Present Concepts of the Nature and Limits of Music.” In, *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 78–85.

———. [1961b] 2003. “Set Structure as a Compositional Determinant.” In, *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 86–108.

———. [1962] 2003. “Twelve-Tone Rhythmic Structure and the Electronic Medium.” In, *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 109–40.

———. [1963] 2003. “Reply to George Perle.” In *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 141–46.

———. [1964a] 2003. “The Synthesis, Perception, and Specification of Musical Time.” In *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 172–77.

———. [1964b] 2003. “An Introduction to the R. C. A. Synthesizer.” In *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 177–90.

———. [1965] 2003. “The Structure and Function of Musical Theory.” In, *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 191–201.

———. [1971] 2003. “Contribution to ‘Stravinsky (1882–1971): A Composer’s Memorial.’” In, *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 264–69.

———. [1972] 2003. “Contemporary Music Composition and Music Theory as Contemporary Intellectual History.” In, *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 270–307.

———. [1976] 2003. “Responses: A First Approximation.” In, *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 341–66.

———. [1979] 2003. "Foreward to *Beyond Orpheus*." In, *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 371–76.

———. 1987. *Words About Music: The Madison Lectures*. Stephen Dembski and Joseph N. Straus, eds. Madison, WI: The University of Wisconsin Press.

———. [1989] 2003. "Being an American Composer." In, *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 428–36.

———. 1991. "A Composer's View." *Harvard Library Bulletin New Series* 2/1: 123–36.

———. [1991] 2003. "A Life of Learning." In, *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 437–58.

———. 1997. "A Response." *Perspectives of New Music* 35/2: 129–36.

———. [1999] 2003. "'My Vienna Triangle at Washington Square,' Revisited and Dilated." In, *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press, 466–87.

———. 2003. *The Collected Essays of Milton Babbitt*. Stephen Peles with Stephen Dembski, Andrew Mead, and Joseph N. Straus, eds. Princeton: Princeton University Press.

Backus, John. 1962. "*Die Reihe*—A Scientific Evaluation." *Perspectives of New Music* 1/1: 160–71.

Barkin, Elaine. [1988] 1997. "Thinking About '…on Being a Composer in America….'" In, Elaine Barkin, *E: An Anthology: Music Texts and Graphics (1975–1995)*. Red Hook, NY: Open Space, 122–23.

———. [1992] 1997. "Being or Not Being a Composer." In, Elaine Barkin, *E: An Anthology: Music Texts and Graphics (1975–1995)*. Red Hook, NY: Open Space, 153–54.

Bayar, Tildy. 2005–2006. "Music Program Zero and Ben Boretz." *Perspectives of New Music* 43/2–44/1: 129–51.

Beal, Amy C. 2006. *New Music, New Allies: American Experimental Music in West Germany from the Zero Hour to Reunification*. Berkeley: University of California Press.

Benitez, Joaquim M. 1978. "Avant-Garde or Experimental? Classifying Contemporary Music." *International Review of the Aesthetics and Sociology of Music* 9/1: 53–77.

Benjamin, Walter. [1928] 1998. *The Origin of German Tragic Drama*. Trans. by John Osborne. New York: Verso.

Benjamin, William. 1981. "Schenker's Theory and the Future of Music." *Journal of Music Theory* 25/1: 155–73.

Berger, Arthur. 1963. "Problems of Pitch Organization in Stravinsky." *Perspectives of New Music* 2/1: 11–42.

———. 1976. "Some Notes on Babbitt and His Influence." *Perspectives of New Music* 14/2–15/1: 32–6.

———. 2002. *Reflections of an American Composer*. Berkeley: University of California Press.

Berger, Arthur, and Benjamin Boretz. 1962. "Editorial Note." *Perspectives of New Music* 1/1: 4–5.

———. [1987] 2003. "A Conversation About *Perspectives*." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks 1960–2003*. Vol. 2: 1978–2003. Red Hook, NY: Open Space, 242–58.

Berkeley, George. [1713] 1998. *Three Dialogues between Hylas and Philonous.* Jonathan Dancy, ed. New York: Oxford University Press.

Blasius, Leslie David. 1996. *Schenker's Argument and the Claims of Music Theory*. Princeton: Princeton University Press.

———. 1997. *The Music Theory of Godfrey Winham*. Princeton, NJ: Department of Music, Princeton University.

———. 2002. "Mapping the Terrain." In, *The Cambridge History of Western Music Theory*. Thomas Christensen, ed. Cambridge: Cambridge University Press, 27–45.

Boretz, Benjamin. [1969] 1995. *Meta-Variations: Studies in the Foundations of Musical Thought*. Red Hook, NY: Open Space.

———. [1970] 2003. "Nelson Goodman's *Languages of Art*, from a Musical Point of View." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks 1960–2003*. Vol. 1: 1960–1978. Red Hook, NY: Open Space, 219–38.

———. [1971a] 2003. "In Quest of the Rhythmic Genius." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks 1960–2003*. Vol. 1: 1960–1978. Red Hook, NY: Open Space, 334–39.

———. [1971b] 2003. "Babbitt, Milton." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks 1960–2003*. Vol. 1: 1960–1978. Red Hook, NY: Open Space, 320–27.

———. [1973–1974] 2003. "A World of Times." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks 1960–2003*. Vol. 1: 1960–1978. Red Hook, NY: Open Space, 360–64.

———. [1977] 2003. "What Lingers on (, When the Song is Ended." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks 1960–2003*. Vol. 2: 1978–2003. Red Hook, NY: Open Space, 421–28.

———. [1978] 2003. "Language ,as a Music: Six Marginal Pretexts for Composition." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks 1960–2003*. Vol. 2: 1978–2003. Red Hook, NY: Open Space, 1–85.

———. [1982] 2003. "Talk: If I am a Musical Thinker." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks 1960–2003*. Vol. 2: 1978–2003. Red Hook, NY: Open Space, 157–212.

———. [1987] 2003. "Relevance. Liberation. (Interface Part IV)." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks 1960–2003*. Vol. 2: 1978–2003. Red Hook, NY: Open Space, 266–70.

———. [1989] 2003. "The Logic of What?" In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks 1960–2003*. Vol. 2: 1978–2003. Red Hook, NY: Open Space, 271–80.

———. [1990a] 2003. "Interface Part V: On Thinking about Various Issues Induced by the Problem of Discovering That One Is Not a 'Composer' and That the Space Which One Inhabits Musically Is Not 'America.'" In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks 1960–2003*. Vol. 2: 1978–2003. Red Hook, NY: Open Space, 281–87.

———. [1990b] 2003. "Dialogue for JKR." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks 1960–2003*. Vol. 2: 1978–2003. Red Hook, NY: Open Space, 303–15.

———. [1992] 2003. "Regretting John Cage and Kenneth Gaburo: A Gathering of Texts." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks 1960–2003*. Vol. 2: 1978–2003. Red Hook, NY: Open Space, 360–71.

———. [1993] 2003. "Experiences with No Names." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks 1960–2003*. Vol. 2: 1978–2003. Red Hook, NY: Open Space, 338–46.

———. [1994] 2003. "music/consciousness/gender." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks 1960–2003*. Vol. 2: 1978–2003. Red Hook, NY: Open Space, 381–433.

———. [1999] 2003. "Music, as a Music: A Multitext in Seven Fragments." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks 1960–2003*. Vol. 2: 1978–2003. Red Hook, NY: Open Space, 479–91.

———. [2001a] 2003. "Introduction for *Music Inside Out*, An Anthology of Texts by John Rahn." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks 1960–2003*. Vol. 2: 1978–2003. Red Hook, NY: Open Space, 443–48.

———. [2001b] 2003. "Music as Anti-Theater." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks 1960–2003*. Vol. 2: 1978–2003. Red Hook, NY: Open Space, 449–72.

———. 2004. "Dust Jacket Review of Katharine Norman, *Sounding Art: Eight Literary Excursions through Electronic Music*." Burlington, VT: Ashgate.

———. 2005–2006. "On Reading Each Other (And Reflecting on Your Texts and Your Music)." *Perspectives of New Music* 43/2–44/1: 466–71.

———. 2008. "Rainyday Reflections." *Perspectives of New Music* 46/2: 59–80.

———. 2012a. "What Did Milton Mean by His Music? How It Looks Now, from Here." *Perspectives of New Music bis* 49/2 & *The Open Space Magazine* no. 14: 372–77.

———. 2012b. "The Zeitgeist of *Perspectives*, ab origine." *Perspectives of New Music* 50/1–2: 9–17.

Boretz, Benjamin, and Edward T. Cone. 1972. "Preface." In, *Perspectives on Contemporary Music Theory*. Benjamin Boretz and Edward T. Cone, eds. New York: W. W. Norton & Company, vii–x.

Boretz, Benjamin, and Mary Lee Roberts. 1999. Mission Statement. *The Open Space Magazine* no. 1: 2.

Born, Georgina. 1995. *Rationalizing Culture: IRCAM, Boulez, and the Institutionalization of the Musical Avant-Garde*. Berkeley: University of California Press.

Boulez, Pierre. [1951] 1991. "Schoenberg is Dead." In, *Stocktakings from an Apprenticeship*. Trans. by Stephen Walsh. New York: Oxford University Press, 209–14.

Bourke, Vernon J. 1968. *History of Ethics*. Vol. 2: Modern and Contemporary Ethics. Mount Jackson, VA: Axios Press.

Brackett, John. 2003. "The Philosophy of Science as a Philosophy of Music Theory." Ph.D. dissertation, UNC Chapel Hill.

Brockmann, Stephen. 2009. *German Literary Culture at the Zero Hour*. Rochester, NY: Camden House.

Brody, Martin. 1993. "'Music for the Masses': Milton Babbitt's Cold War Music Theory." *Musical Quarterly* 77/2: 161–92.

———. 2005/2006. "Togetherness." *Perspectives of New Music* 43/2–44/1: 425–33.

———. 2012. "The Age of Milton." *Perspectives of New Music* 49/2 *bis*/*The Open Space Magazine* no. 14: 365–71.

Brown, Matthew and Douglas J. Dempster. 1989. "The Scientific Image of Music Theory." *Journal of Music Theory* 33/1: 65–106.

Buber, Martin. [1923] 1970. *I and Thou*. Trans. by Walter Kaufmann. New York: Touchstone.

Burnham, Scott. 1995. *Beethoven Hero*. Princeton: Princeton University Press.

Cage, John. [1961a] 1966. "Experimental Music." In, *Silence*. Cambridge, MA: The MIT Press, 7–12.

———. [1961b] 1966. "Experimental Music: Doctrine." In, *Silence*. Cambridge, MA: The MIT Press, 12–17.

Carey, Christian. n.d. "Review: Re-reading Babbitt: The Composer as Author. Princeton University, December 5, 2003." *Splendid Magazine* http://www.splendidmagazine.com/departments/fileunder/fileunder22304.html (Accessed June 3, 2012)

Carmichael, L., H. P. Hogan, and A. A. Walter. 1932. "An Experimental Study of the Effect of Language on the Reproduction of Visually Perceived Form." *Journal of Experimental Psychology* 15/1: 73–86.

Carnap, Rudolf. [1928] 2003. *The Logical Structure of the World* and *Pseudoproblems in Philosophy*. Trans. by Rolf A. George. Chicago: Open Court Press.

———. [1930] 1959. "The Old and the New Logic." In, *Logical Positivism*. Trans. by Isaac Levi and A. J. Ayer, ed. Glencoe, Illinois: The Free Press, 133–46.

———. [1932] 1959. "The Elimination of Metaphysics Through the Logical Analysis of Language." In, *Logical Positivism*. Trans. by Arthur Pap and A. J. Ayer, ed. Glencoe, Illinois: The Free Press, 60–81.

———. 1934. *The Unity of Science*. London: Kegan Paul, Trench, Hubner.

———. 1958. *Introduction to Symbolic Logic and Its Applications*. Trans. by William H. Meyer and John Wilkinson. New York: Dover Publications.

Ceely, Robert. 1972. "Communication." *Perspectives of New Music* 11/1: 258–61.

Chalmers, David J. 2012. *Constructing the World*. New York: Oxford University Press.

Christensen, Thomas. 2002. "Introduction." In, *The Cambridge History of Western Music Theory*. Cambridge: Cambridge University Press, 1–23.

"A Columbia Group Bids 4 Get Tenure." 1971. *The New York Times* March 18, 43.

Cohen, David. 1960. "Re: The Princeton Seminar in Advanced Musical Studies." *Journal of Music Theory* 4/2: 218–20.

Cone, Edward T. 1960. "Analysis Today." *Musical Quarterly* 46/2: 172–88.

———. 1962. "Stravinsky: The Progress of a Method." *Perspectives of New Music* 1/1: 18–26.

———. 1967. "Beyond Analysis." *Perspectives of New Music* 6/1: 33–51.

Cook, Nicholas. 1987. *A Guide to Musical Analysis*. New York: W. W. Norton & Company.

———. 2002. "Epistemologies of Music Theory." In, *The Cambridge History of Western Music Theory*. Thomas Christensen, ed. Cambridge: Cambridge University Press, 78–105.

Cook, Nicholas, and Mark Everist. [1999] 2001. "Preface." In, *Rethinking Music*. New York: Oxford University Press, v–xii.

Cory, Eleanor. 2012. "Interview with Eleanor Cory." *Perspectives of New Music* 50/1–2: 147–52.

Dahlhaus, Carl. [1970] 1983. *Analysis and Value Judgement*. Trans. by Siegmund Levaire. New York: Pendragon Press.

Davis, James A. 1993. "Positivistic Philosophy and the Foundations of Atonal Music Theory." Ph.D. dissertation, Boston University.

Deleuze, Gilles, and Félix Guattari. [1980] 1987. *A Thousand Plateaus: Capitalism and Schizophrenia*. Trans. by Brian Massumi. Minneapolis: University of Minnesota Press.

Dembski, Stephen. 2012. "…alone. Together." *Music Theory Spectrum* 34/1: 7–8.

Derkert, Jacob. 2007. "Mathematics and Ideology in Modernist Music Theory." In, *What Kind of Music Theory Is Music Theory? Epistemological Exercises in Music Theory and Analysis*. Per F. Broman and Nora A. Engebretsen, eds. Stockholm: Stockholm University, 217–51.

Derrida, Jacques. [1967] 1973. *Speech and Phenomena and Other Essays on Husserl's Theory of Signs*. Trans. by David B. Allison. Evanston, IL: Northwestern University Press.

———. [1967] 1976. *Of Grammatology*. Trans. by Gayatri Chakravorty Spivak. Baltimore: The Johns Hopkins University Press.

———. [1967] 1978. *Writing and Difference*. Trans. by Alan Bass. Chicago: University of Chicago Press.

Descartes, René. [1641] 1998. *Meditations on First Philosophy*. In, *Selected Philosophical Writings*. Trans. by John Cottingham, Robert Stoothoff, and Dugald Murdoch. Cambridge: Cambridge University Press, 73–122.

Dewey, John. [1934] 1980. *Art as Experience*. New York: Perigee Books.

Don, Gary. 1996. "Goethe, Boretz, and the 'Sensuous Idea.'" *Perspectives of New Music* 34/1: 124–39.

Driesch, Hans. [1905] 1914. *The History and Theory of Vitalism*. Trans. by C. K. Odgen. New York: MacMillan.

Drott, Eric. 2005. "Timbre and the Cultural Politics of French Spectralism." *Proceedings of the Conference on Interdisciplinary Musicology* (CIM05). www.oicm.umontreal.ca/cim05

Dubiel, Joseph. [1999] 2001. "Composer, Theorist, Composer/Theorist." In, *Rethinking Music*. Nicholas Cook and Mark Everist, eds. New York: Oxford University Press, 262–83.

———. 2000a. "Analysis, Description, and What Really Happens." *Music Theory Online* 6/3.

———. 2000b. "Joseph Dubiel Replies." *Music Theory Online* 6/3.

———. 2002. Distance, Direction, Order: Class Notes for Introduction to Pitch Class Set Theory. Manuscript.

———. 2004. "Uncertainty, Disorientation, and Loss as Responses to Musical Structure." In, *Beyond Structural Listening? Postmodern Modes of Hearing*. Berkeley: University of California Press, 173–200.

———. 2007. Dust Jacket Review for David Lewin, reprint of *Generalized Musical Intervals and Transformations*. New York: Oxford University Press, n.p.

———. 2012. "Interview with Joseph Dubiel." *Perspectives of New Music* 50/1–2: 83–95.

Dummett, Michael. 1993. *Origins of Analytical Philosophy*. Cambridge, MA: Harvard University Press.

Englund, Axel. 2008. "(Im)possibilities of Communication: Celan, Ruzicka, Dittrich." *Perspectives of New Music* 46/2: 5–32.

Epstein, David. 1979. *Beyond Orpheus: Studies in Musical Structure*. Cambridge, MA: The MIT Press.

Feldman, Morton. 1962. Liner Notes to "Morton Feldman/Earle Brown." Time Records. 58007.

———. [1966] 2011. "Boola Boola." In, *Source: Music of the Avant-Garde, 1966–1973*. Larry Austin and Douglas Kahn, eds. Berkeley: University of California Press, 273–75.

Forrest, David, Severine Neff, and John Reef. 2013. "American Music Theory, 1955–2010." *Oxford Bibliographies Online*. (Accessed April 9, 2013.)

Forte, Allen. [1959] 1977. "Schenker's Conception of Musical Structure." In, *Readings in Schenker Analysis and Other Approaches*. Maury Yeston, ed. New Haven: Yale University Press, 3–37.

———. 2000a. "Response by Allen Forte." *Music Theory Online* 6/3.

———. 2000b. "Allen Forte Responds Again." *Music Theory Online* 6/3.

Fox, Christopher. 2007. "Music After Zero Hour." *Contemporary Music Review* 26/1: 5–24.

Freud, Sigmund. [1916] 1966. "Parapraxes." In, *Introductory Lectures on Psycho-Analysis*. Trans. and ed. by James Strachey. New York: W. W. Norton & Company, 17–98.

Friedman, Michael. 1999. *Reconsidering Logical Positivism*. Cambridge: Cambridge University Press.

———. 2007a. "The *Aufbau* and the Rejection of Metaphysics." In, *The Cambridge Companion to Carnap.* Richard Creath and Michael Friedman, eds. Cambridge: Cambridge University Press, 129–52.

———. 2007b. "Coordination, Constitution, and Convention: The Evolution of the A Priori in Logical Empiricism." In, *The Cambridge Companion to Logical Empiricism.* Alan Richardson and Thomas Uebel, eds. Cambridge: Cambridge University Press, 91–116.

Fromm, Paul. 1962. "Young Composers: Perspective and Prospect." *Perspectives of New Music* 1/1: 1–3.

Galison, Peter. 1996. "Constructing Modernism: The Cultural Location of *Aufbau*." In, *Minnesota Studies in the Philosophy of Science: Vol. XVI Origins of Logical Empiricism*. Ronald N. Giere and Alan W. Richardson, eds. Minneapolis: University of Minnesota Press, 17–44.

Gamer, Carlton. 2012. "Milton at the Princeton Seminars: A Remembrance." *Perspectives of New Music* 49/2 *bis*/*The Open Space Magazine* no. 14, 361–64.

Gann, Kyle. 2006. "Introduction: The Importance of Being Downtown." In, *Writings from the* Village Voice. Berkeley: University of California Press, 1–15.

Girard, Aaron. 2007. "Music Theory in the American Academy." Ph.D. dissertation, Harvard University.

———. 2008. "Milton Babbitt, Allen Forte, and the Early Disciplining of Modern Theory." In, *Musiktheorie im Kontext*. Band 9. Jan Philipp Sprick, Reinard Bahr, and Michael von Troschke, eds. Berlin: Weidler Buchverlag.

———. 2010. "Music as a (Science as a) Liberal Art at Princeton." *Zeitschrift der Gesellschaft für Musiktheorie*. http://www.gmth.de/zeitschrift/artikel/563.aspx

Goehr, Lydia. 2008. *Elective Affinities: Musical Essays on the History of Aesthetic Theory*. New York: Columbia University Press.

Goodman, Nelson. [1951] 1966. *The Structure of Appearance*. 2nd ed. Indianapolis: The Bobbs-Merrill Co., Inc.

———. 1978. *Ways of Worldmaking*. Indianapolis: Hackett Publishing Co.

Guck, Marion. 1997. "Rigors of Subjectivity." *Perspectives of New Music* 35/2: 53–64.

Harker, Brian. 2008. "Milton Babbitt Encounters Academia (And Vice Versa)." *American Music* 26/3: 336–77.

Healy, Felicia. [1968] 2011. "Letter to the Editor." In, *Source: Music of the Avant-garde, 1966–1973*. Ed. by Larry Austin and Douglas Kahn. Berkeley: University of California Press, 23.

Heidegger, Martin. [1927a] 1962. *Being and Time*. Trans. by John Macquarrie and Edward Robinson. New York: Haper Perennial.

———. [1927b] 2010. *Being and Time*. Rev. ed. Trans. by Joan Stambaugh. Albany, NY: State University of New York Press.

———. [1946] 1998. "Letter on Humanism." In, *Pathmarks*. William McNeill, ed. Cambridge: Cambridge University Press.

———. [1969] 1972. "On Time and Being." In, *On Time and Being*. Trans. by Joan Stambaugh. New York: Harper Torchbooks.

Heile, Björn. 2004. "Darmstadt as Other: British and American Responses to Musical Modernism." *Twentieth-Century Music* 1/2: 161–78.

Hempel, Carl. [1950a] 1959. "The Empiricist Criterion of Meaning." In, *Logical Positivism*. A. J. Ayer, ed. New York: The Free, Press, 108–32.

———. [1950b] 1965. "Empiricist Criteria of Cognitive Significance: Problems and Challenges." In, *Aspects of Scientific Explanation and Other Essays in the Philosophy of Science*. New York: The Free Press, 101–22.

———. 1953. "Reflections on Nelson Goodman's *The Structure of Appearance*." *The Philosophical Review* 62/1: 108–16.

———. [1958] 1965. "The Theoretician's Dilemma: A Study in the Logic of Theory Construction." In, *Aspects of Scientific Explanation and Other Essays in the Philosophy of Science*. New York: The Free Press, 173–226.

Hibbard, Allen. 1985. "Improvisatory Word Piece on a Tape by Ben Boretz and J. K. Randall." *Perspectives of New Music* 23/2: 96–100.

Hilferty, Robert, and Laura Karpman. 2011. *Milton Babbitt: Portrait of a Serial Composer*. http://www.npr.org/event/music/144763523/milton-babbitt-portrait-of-a-serial-composer. (Accessed August 12, 2013.)

Hoeckner, Berthold. 2002. *Programming the Absolute: Nineteenth-Century German Music and the Hermeneutics of the Moment.* Princeton, NJ: Princeton University Press.

Hollander, John. 1963. "Review: *Silence* by John Cage." *Perspectives of New Music* 1/2: 137–41.

Horton, Julian. 2001. "Postmodernism and the Critique of Musical Analysis." *The Musical Quarterly* 85/2: 342–66.

Hubbs, Nadine. 2004. *The Queer Composition of America's Sound: Gay Modernists, American Music, and National Identity*. Berkeley: The University of California Press.

Hume, David. [1737–1740] 2000. *A Treatise of Human Nature*. David Fate Norton and Mary J. Norton, eds. New York: Oxford University Press.

Husserl, Edmund. [1913a] 1983. *Ideas Pertaining to a Pure Phenomenology and to a Phenomenological Philosophy: Volume I*. Trans. by F. Kersten. The Hague & Boston: Martinus Nijhoff Publishers.

———. [1913b] 1989. *Ideas Pertaining to a Pure Phenomenology and to a Phenomenological Philosophy: Volume III*. Trans. by Richard Rojcewicz and André Schuwer. Dordrecht & Boston: Kluwer Academic Publishers.

———. [1931] 1999. *Cartesian Meditations: An Introduction to Phenomenology*. Trans. by Dorion Cairns. Dordrecht & Boston: Kluwer Academic Publishers.

James, William. [1890] 1981. *The Principles of Psychology*. Cambridge, MA: Harvard University Press.

Jameson, Fredric. 1981. *The Political Unconscious: Narrative as a Socially Symbolic Act*. Ithaca, NY: Cornell University Press.

———. 2011. *Representing* Capital: *A Reading of Volume One*. New York: Verso.

Jay, Martin. 2005. *Songs of Experience: Modern American and European Variations on a Universal Theme*. Berkeley: University of California Press.

Johnstone, Albert A. 1991. *Rationalized Epistemology: Taking Solipsism Seriously*. Albany, NY: State University of New York Press.

Kane, Brian. 2011. "Excavating Lewin's 'Phenomenology.'" *Music Theory Spectrum* 33/1: 27–36.

Karabel, Jerome. 2005. *The Chosen: The Hidden History of Admission and Exclusion at Harvard, Yale, and Princeton*. Boston: Houghton Mifflin Co.

Kassler, Michael. 1967. "A Trinity of Essays." Ph.D. dissertation: Princeton University.

Keiler, Allan R. 1981. "Music as Metalanguage: Rameau's Fundamental Bass." In, *Music Theory: Special Topics*. Richmond Browne, ed. Orlando: Academic Press, 83–100.

Kerman, Joseph. 1963. "'The Proper Study of Music': A Response." *Perspectives of New Music* 2/1: 151–60.

———. 1985. *Contemplating Music: Challenges to Musicology*. Cambridge, MA: Harvard University Press.

Kielian-Gilbert, Marianne. 2012. "Interview with Marianne Kielian-Gilbert." *Perspectives of New Music* 50/1–2: 104–11.

King, Magda. 2001. *A Guide to Heidegger's* Being and Time. John Llewelyn, ed. Albany, NY: State University of New York Press.

Korsyn, Kevin. 2003. *Decentering Music: A Critique of Contemporary Musical Research.* New York: Oxford University Press.

Krenek, Ernst. [1937] 1977. *Über Neue Musik: Sechs Vorlesungen zur Einführung in die theoretischen Grundlagen*. Darmstadt: Wissenschaftliche Buchgesellschaft.

Kyburg, Henry E., Jr. 1968. *Philosophy of Science: A Formal Approach*. New York: The Macmillan Co.

Lang, Paul Henry, ed. 1960. *Problems of Modern Music: The Princeton Seminar in Advanced Musical Studies*. New York: W. W. Norton & Company.

Lehmann, Ulrich. 2000. *Tigersprung: Fashion in Modernity*. Cambridge, MA: The MIT Press.

Leibniz, G. W. [1714] 1989. "The Principles of Philosophy, or, the Monadology." Trans. and ed. by Roger Ariew and Daniel Garber. Indianapolis, IN: Hackett Publishing Company, 213–25.

Lerdahl, Fred. 2003. "What Role Has Theory Played in Your Compositions and How Important is It for People to Know the Theory Behind the Music in Order to Appreciate It?" *New Music Box* http://www.newmusicbox.org/articles/What-role-has-theory-played-in-your-compositions-and-how-important-is-it-for-people-to-know-the-theory-behind-the-music-in-order-to-appreciate-it-Fred-Lerdahl/ (Accessed July 22, 2013.)

Lerdahl, Fred, and Ray Jackendoff. 1983. *A Generative Theory of Tonal Music*. Cambridge, MA: The MIT Press.

Lester, Joel. 1992. *Compositional Theory in the Eighteenth Century*. Cambridge, MA: Harvard University Press.

Lewin, David. [1986] 2006. "Music Theory, Phenomenology, Modes of Perception." In, *Studies in Music with Text*. New York: Oxford University Press, 53–108.

———. 1987a. "Concerning the Inspired Revelation of F.-J. Fétis." *Theoria* vol. 2: 1–12.

———. [1987b] 2007. *Generalized Musical Intervals and Transformations*. New York: Oxford University Press.

———. [1993] 2007. *Musical Form and Transformation: Four Analytic Essays*. New York: Oxford University Press.

———. [1995] 2006. "Figaro's Mistakes." In, *Studies in Music with Text*. New York: Oxford University Press, 5–18.

Lewis, C. I. 1929. *Mind and the World-Order: Outline of a Theory of Knowledge*. New York: Dover Publications.

Lewis, George E. 1996. "Improvised Music After 1950: Afrological and Eurological Perspectives." *Black Music Research Journal* 16/1: 91–122.

Levinas, Emmanuel. [1947] 1987. *Time and the Other*. Trans. by Richard A. Cohen. Pittsburgh, PA: Duquesne University Press.

Mailman, Josh. 1996. "The Aims of Music Theory and Neurath's Boat: A Reply to Jonathan Walker and Matthew Brown." *Music Theory Online* 2/4.

Maimonides, Moses. [1190] 2004. *The Guide for the Perplexed*. Trans. by M. Friedländer. New York: Barnes & Noble.

Martino, Donald. 1961. "The Source Set and Its Aggregate Formations." *Journal of Music Theory* 5/2: 224–73.

———. 2002. "Letter to the Editor." *The Open Space Magazine* no. 4: 3.

Marx, A. B. 1997. *Musical Form in the Age of Beethoven*. Scott Burnham, trans. and ed. Cambridge: Cambridge University Press.

Mauceri, Frank X. 1997. "From Experimental Music to Musical Experiment." *Perspectives of New Music* 35/1: 187–204.

Maus, Fred Everett. [1988] 1994. "Recent Ideas and Activities of James K. Randall and Benjamin Boretz: A New Social Role for Music." In, *Perspectives on Music Aesthetics*. John Rahn, ed. New York: W. W. Norton & Company, 107–15.

———. 1993. "Masculine Discourse in Music Theory." *Perspectives of New Music* 31/2: 254–93.

———. 2004. "Sexual and Musical Categories." In, *The Pleasure of Modernist Music*. Arved Ashby, ed. Rochester, NY: University of Rochester Press, 153–75.

McClary, Susan. [1989] 1997. "Terminal Prestige: The Case of Avant-Garde Music Composition." In, *Keeping Score: Music, Disciplinarity, Culture*. David Schwartz, et al., eds. Richmond: University of Virginia Press, 57–74.

McGuinness, Brian. 2002. *Approaches to Wittgenstein: Collected Papers*. New York: Routledge.

Merleau-Ponty, Maurice. [1945] 1962. *Phenomenology of Perception*. Trans. by Colin Smith. New York: Routledge.

Misak, C. J. 1995. *Verificationism: Its History and Prospects*. New York: Routledge.

Morgan, Caleb, and Michael Davis. 2009. "More Multiple Order Function and Mallalieu-Related Rows." *Perspectives of New Music* 47/2: 100–48.

Morris, Robert. 2007. "Mathematics and the Twelve-Tone System: Past, Present, and Future." *Perspectives of New Music* 45/2: 76–107.

———. 2012a. "What Milton Babbitt Enabled." *Music Theory Spectrum* 34/1: 19–21.

———. 2012b. "Interview with Robert Morris." *Perspectives of New Music* 50/1–2: 62–82.

Moshaver, Maryam. 2012. "*Telos* and Temporality: Phenomenology and the Experience of Time in Lewin's Study of Perception." *Journal of the American Musicological Society* 65/1: 179–214.

Mosteller, Timothy. 2006. *Relativism in Contemporary American Philosophy*. New York: Continuum.

"Music Seminar Planned." 1958. *Town Topics*. 21 December, 30.

Nattiez, Jean-Jacques. [1987] 1990. *Music as Discourse: Toward a Semiology of Music*. Trans. by Carolyn Abbate. Princeton: Princeton University Press.

Nicholls, David. 1998. "Avant-Garde and Experimental Music." In, *The Cambridge History of American Music.* David Nicholls, ed. Cambridge: Cambridge University Press, 517–34.

Nietzsche, Friedrich. [1872] 2000. "The Birth of Tragedy." In, *Basic Writings of Nietzsche*. Trans. by Walter Kaufmann. New York: The Modern Library, 1–144.

———. [1874] 1997. "On the Uses and Disadvantages of History for Life." In, *Untimely Meditations*. Trans. by R. J. Hollingdale and Daniel Breazeale, ed. Cambridge: Cambridge University Press, 57–123.

———. [1883] 1954. "Thus Spoke Zarathustra." In, *The Portable Nietzsche*. Trans. by Walter Kaufmann. New York: Penguin Books, 103–439.

Nyman, Michael. [1974] 1999. *Experimental Music: Cage and Beyond*. Cambridge: Cambridge University Press.

Paredes, Robert. 2005–2006. "Might Never Have Been: To and For Benjamin Boretz." *Perspectives of New Music* 43/2–44/1: 266–79.

Partch, Harry. 1966. "Lecture." In, *Source: Music of the Avant-garde, 1966–1973*. Larry Austin and Douglas Kahn, eds. Berkeley: University of California Press, 35–7.

Pasler, Jann. 2008. "The Political Economy of Composition in the American University, 1965–1985." In, *Writing Through Music: Essays on Music, Culture, and Politics*. New York: Oxford University Press, 318–64.

Patterson, Nick. 2011. "The Archives of the Columbia-Princeton Electronic Music Center." *Notes* 67/3: 483–502.

Pears, David. 1987. *The False Prison: A Study of the Development of Wittgenstein's Philosophy*. Vol. 1. New York: Oxford University Press.

Putnam, Hilary. 2002. *The Collapse of the Fact/Value Dichotomy and Other Essays*. Cambridge, Mass.: Harvard University Press.

———. 2008a. *Jewish Philosophy as a Guide to Life: Rosenzweig, Buber, Levinas, Wittgenstein*. Bloomington, IN: Indiana University Press.

Quine, W. V. O. [1951] 2004. "Two Dogmas of Empiricism." In, *Quintessence: Basic Readings from the Philosophy of W. V. Quine*. Roger F. Gibson, ed. Cambridge, MA: The Belknap Press of Harvard University, 31–53.

———. [1953] 2004. "On Mental Entities." In, *Quintessence: Basic Readings from the Philosophy of W. V. Quine*. Roger F. Gibson, ed. Cambridge, MA: The Belknap Press of Harvard University, 307–12.

———. [1975] 2004. "The Nature of Natural Knowledge." In, *Quintessence: Basic Readings from the Philosophy of W. V. Quine*. Roger F. Gibson, ed. Cambridge, MA: The Belknap Press of Harvard University, 287–300.

Rahn, Jay. 1983. *A Theory for All Music*. Toronto: University of Toronto Press.

Rahn, John. 1974. "Lines (Of and About Music)." Ph.D. dissertation, Princeton University.

———. [1979] 2001. "Aspects of Musical Explanation." In, *Music Inside Out: Going Too Far in Musical Essays*. Amsterdam: G&B Arts International, 51–68.

———. [1989a] 2001. "Notes on Methodology in Music Theory." In, *Music Inside Out: Going Too Far in Musical Essays*. Amsterdam: G&B Arts International, 69–82.

———. [1989b] 2001. "New Research Paradigms." In, *Music Inside Out: Going Too Far in Musical Essays*. Amsterdam: G&B Arts International, 83–99.

———. [1989c] 2001. "What Is Valuable in Art, and Can Music Still Achieve It?" In, *Music Inside Out: Going Too Far in Musical Essays*. Amsterdam: G&B Arts International, 147–59.

———. [1993] 2001. "Differences." In, *Music Inside Out: Going Too Far in Musical Essays*. Amsterdam: G&B Arts International, 21–34.

———. 1994. "Introduction: The Aesthetics of *Perspectives*." In, *Perspectives on Musical Aesthetics*. New York: W. W. Norton & Company, 1–4.

———. 2008. "*Mille Plateaux*, You Tarzan: A Musicology of (an Anthropology of (an Anthropology of *A Thousand Plateaus*))." *Perspectives of New Music* 46/2: 81–92.

———. 2012. "Interview with John Rahn." *Perspectives of New Music* 50/1–2: 33–61.

Randall, J. K. 1963. "Tonality." Unpublished manuscript. J. K. Randall Collection, JPB 12-03. Music Division, The New York Public Library for the Performing Arts.

———. [1967] 2003. "Three Lectures to Scientists." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks* Vol. 1: 1960–1978. Red Hook, NY: Open Space, 144–60.

———. [1970] 1995. *Compose Yourself—A Manual for the Young*. In, Benjamin Boretz and J. K. Randall, *Meta-Variations* and *Compose Yourself*. Vol. 2. Red Hook, NY: Open Space.

———. [1970] 2003. "Depth of Surface." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks* Vol. 1: 1960–1978. Red Hook, NY: Open Space, 240–319.

———. 1970–71. *Compose Yourself: A Manual for the Young*: Drafts. J. K. Randall Collection, JPB 12-03. Music Division, The New York Public Library for the Performing Arts.

———. 1971. "Stravinsky in Person." *Perspectives of New Music* 9/2–10/1: 134.

———. [1974] 2003. "A Soundscroll." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks* Vol. 1: 1960–1978. Red Hook, NY: Open Space, 366–88.

———. [1977] 2003. "How Music Goes." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks* Vol. 1: 1960–1978. Red Hook, NY: Open Space, 444–537.

———. [1991] 2003. "Reader's Report to the Graduate School of Princeton University concerning Ph.D. theses by Eliot Handelman and Douglas Henderson." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks* Vol. 2: 1978–2003. Red Hook, NY: Open Space, 329–37.

———. [1993] 2003. "Ten Thoughts (1993) About *Lyric Variations for Violin and Computer* (1965–68)." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks* Vol. 2: 1978–2003. Red Hook, NY: Open Space, 372.

———. 2003. "Prefatory Note." In, J. K. Randall and Benjamin Boretz, *Being About Music: Textworks* Vol. 1: 1960–1978. Red Hook, NY: Open Space, 1.

———. 2010–2011. "Have You Heard? (Two books about John Cage)." *The Open Space Magazine* nos. 12/13: 69–86.

———. 2011. "Interview with J. K. Randall." With Dorota Czerner. Princeton, NJ. Recorded June 30. The New York Public Library for the Performing Arts. LDV 1723 DVD.

Rehding, Alexander. 2003. *Hugo Riemann and the Birth of Modern Music Thought*. Cambridge: Cambridge University Press.

Reichenbach, Hans. 1938. *Experience and Prediction: An Analysis of the Foundations and the Structure of Knowledge*. Chicago: University of Chicago Press.

———. 1951. *The Rise of Scientific Philosophy*. Berkeley: University of California Press.

Reisch, George A. 2005. *How the Cold War Transformed Philosophy of Science*. Cambridge: Cambridge University Press.

Richardson, Alan W. 1998. *Carnap's Construction of the World: The* Aufbau *and the Emergence of Logical Empiricism*. Cambridge: Cambridge University Press.

Ricoeur, Paul. [1967] 2007. *Husserl: An Analysis of His Phenomenology*. Trans. by Edward G. Ballard and Lester E. Embree. Evanston, IL: Northwestern University Press.

Rings, Steven. 2011. *Tonality and Transformation*. New York: Oxford University Press.

Rockmore, Tom. 1991. *On Heidegger's Nazism and Philosophy*. Berkeley: University of California Press.

Rockwell, John. 1973. "Sound of New Music is Likened to Art; Break with Tradition." *The New York Times* January 3, 48.

Ross, Alex. 2007. *The Rest is Noise: Listening to the Twentieth Century*. New York: Farrar, Straus and Giroux.

Runes, Dagobert D., ed. 1960. *The Dictionary of Philosophy*. 16th Revised Edition. New York: Philosophical Library.

Russell, Bertrand. [1912] 1997. *The Problems of Philosophy*. New York: Oxford University Press.

———. [1914a] 1993. *Our Knowledge of the External World As a Field for Scientific Method in Philosophy*. New York: Routledge.

———. [1914b] 1956. "On the Nature of Acquaintance." In, *Logic and Knowledge: Essays 1901–1950*. Robert Charles Marsh, ed. New York: The Macmillan Company, 125–74.

———. [1918] 1956. "The Philosophy of Logical Atomism." In, *Logic and Knowledge: Essays 1901–1950*. Robert Charles Marsh, ed. New York: The Macmillan Company, 175–282.

———. 1945. *The History of Western Philosophy*. New York: Simon & Schuster.

Ryckman, Thomas. 2007. "Carnap and Husserl." In, *The Cambridge Companion to Carnap*. Michael Friedman and Richard Creath, eds. New York: Cambridge University Press, 81–105.

Schalow, Frank, and Alfred Denker. 2010. *Historical Dictionary of Heidegger's Philosophy*. 2nd Edition. Lanham: The Scarecrow Press.

Schenker, Heinrich. [1926] 1996. "Further Considerations of the Urlinie: II." In, *The Masterwork in Music, A Yearbook*, Vol. 2. Trans. by John Rothgeb, William Drabkin, ed. Cambridge: Cambridge University Press, 1–22.

Scherzinger, Martin. 2002. "Feminine/Feminist? In Quest of Names with No Experiences (Yet)." In, *Postmodern Music/Postmodern Thought*. Joseph Auner and Judith Lochhead, eds. New York: Routledge, 141–76.

———. 2004. "The Return of the Aesthetic: Musical Formalism and Its Place in Political Critique." In, *Beyond Structural Listening? Postmodern Modes of Hearing.* Andrew Dell'Antonio, ed. Berkeley: University of California Press, 252–78.

———. 2005–2006. "Heideggerian Thought in the Early Music of Paul Hindemith (With a Foreward to Benjamin Boretz)." *Perspectives of New Music* 43/2–44/1: 80–125.

Schlick, Mortiz. [1925] 1985. *General Theory of Knowledge*. Albert E. Blumberg, trans. La Salle, Illinois: Open Court.

———. [1932] 1959. "Positivism and Realism." In, *Logical Positivism*. A. J. Ayer, ed. New York: The Free Press, 82–107.

———. [1939] 1959. "What is the Aim of Ethics?" In, *Logical Positivism*. A. J. Ayer, ed. New York: The Free Press, 247–63.

Schoenberg, Arnold. [1941] 1975. "Composition with Twelve Tones (1)." In, *Style and Idea: Selected Writings of Arnold Schoenberg*. Trans. by Leo Black and Leonard Stein, ed. Berkeley: University of California Press, 214–45.

———. [1946] 1975. "Heart and Brain in Music." In, *Style and Idea*. Trans. by Leo Black and Leonard Stein, ed. Berkeley: University of California Press, 53–76.

———. [1947] 1975. "Is It Fair?" In, *Style and Idea*. Trans. by Leo Black and Leonard Stein, ed. Berkeley: University of California Press, 249–50.

Schopenhauer, Arthur. [1818] 1969. *The World as Will and Representation*. Vol. 1. Trans. by E. F. J. Payne. New York: Dover Publications.

Schuijer, Michael. 2008. *Analyzing Atonal Music: Pitch-Class Set Theory and Its Contexts*. Rochester, NY: University of Rochester Press.

Scotto, Ciro. 2004–2005. "Music Theory at the Turn of the Millennium and *The Open Space Magazine*." *Intégral* vols. 18/19: 223–72.

———. 2012. "Interview with Ciro Scotto." *Perspectives of New Music* 50/1–2: 214–23.

Seeger, Charles. 1958. "Prescriptive and Descriptive Music-Writing." *The Musical Quarterly* 44/2: 184–95.

Sellars, Wilfrid. [1956] 2000. "Empiricism and the Philosophy of Mind." In, *Knowledge, Mind, and the Given: Reading Wilfrid Sellars's 'Empiricism and the Philosophy of Mind.'* Willem A. deVries and Timm Triplett, eds. Indianapolis, IN: Hackett Publishing Co., 205–76.

"Set Puzzle Solution." 1976. *In Theory Only* 2/5: 35.

Snyder, Matthew. 2012. "Guide to the J. K. Randall Collection." Music Division, The New York Public Library for the Performing Arts.

Solie, Ruth A. 1980. "The Living Work: Organicism and Musical Analysis." *19th-Century Music* 4/2: 147–56.

Stein, Charles. 2005/2006. "Heidegger without Heidegger: The Musical Thinking of Benjamin Boretz." *Perspectives of New Music* 43/2–44/1: 126–28.

Stockhausen, Karlheinz. 1962. "The Concept of Unity in Electronic Music." *Perspectives of New Music* 1/1: 39–48.

Straus, Joseph N. 1986. "Listening to Babbitt." *Perspectives of New Music* 24/2: 10–24.

Subotnik, Rose Rosengard. 2004. "Afterword: Toward the Next Paradigm of Musical Scholarship." In, *Beyond Structural Listening? Postmodern Modes of Hearing*. Berkeley: University of California Press, 279–302.

Suppe, Frederick. [1973] 1977. "The Search for Philosophic Understanding of Scientific Theories." In, *The Structure of Scientific Theories*. 2nd ed. Frederick Suppe, ed. Urbana, IL: University of Illinois Press, 3–232.

Suppes, Patrick. 1957. *Introduction to Logic*. Princeton, NJ: D. van Nostrand Company, Inc.

———. [1960] 1972. *Axiomatic Set Theory*. Princeton, NJ: D. van Nostrand Company, Inc.

Taruskin, Richard. 2005. *The Oxford History of Western Music*. Vol. 5, *Music in the Late Twentieth Century*. New York: Oxford University Press.

———. 2009. "Afterward: *Nicht blutbefleckt?*" *The Journal of Musicology* 26/2: 274–84.

Tomlinson, Gary. 1984. "The Web of Culture: A Context for Musicology." *19th Century Music* 7/3: 350–62.

———. 1993. "Musical Pasts and Postmodern Musicologies: A Response to Lawrence Kramer." *Current Musicology* 53: 18–24.

Walker, Alan. 1966. *An Anatomy of Musical Criticism*. Philadelphia: Chilton Book Company.

Wason, Robert W. 2002. "*Musica Practica*: Music Theory as Pedagogy." In, *The Cambridge History of Western Music Theory*. Thomas Christensen, ed. Cambridge: Cambridge University Press, 46–77.

Westergaard, Peter. 1965. "Some Problems Raised by the Rhythmic Procedures in Milton Babbitt's Composition for Twelve Instruments." *Perspectives of New Music* 4/1: 109–18.

———, ed. [1966] 1968. "Discussion: What do You, as a Composer, Try to Get the Student to Hear in a Piece of Music?" *Proceedings of the American Society of University Composers*, 1st Conference, 59–81.

Weyl, Hermann. 1949. *Philosophy of Mathematics and Natural Science*. Trans. by Olaf Helmer. Princeton: Princeton University Press.

Williams, William Carlos. [1948] 1992. *Paterson*. New York: New Directions Books.

Winham, Godfrey. [1964] 1972. "Composition with Arrays." In, *Perspectives on Contemporary Music Theory*. Benjamin Boretz and Edward T. Cone, eds. New York: W. W. Norton & Company, 261–85.

Wittgenstein, Ludwig. [1921] 1974. *Tractatus Logico-Philosophicus*. Trans. by D. F. Pears and B. F. McGuinness. New York: Routledge.

———. [1933–1935] 1958. *The Blue and Brown Books: Preliminary Studies for the "Philosophical Investigations."* New York: Harper Torchbooks.

———. [1953] 2009. *Philosophical Investigations*. Rev. 4th ed. Trans. by G. E. M. Anscombe, P. M. S. Hacker, and Joachim Schulte. Malden, MA: Wiley-Blackwell.

———. 1979. *Wittgenstein's Lectures: Cambridge, 1932–1935*. Alice Ambrose, ed. Totowa, NJ: Rowan and Littlefield.

Wolin, Richard, ed. 1992. *The Heidegger Controversy: A Critical Reader*. Cambridge, MA: The MIT Press.

Woods, Ledger. 1960. "Solipsism." In, *The Dictionary of Philosophy*. Dagobert D. Runes, ed. New York: Philosophical Library.

Wright, James K. 2005. *Schoenberg, Wittgenstein, and the Vienna Circle*. New York: Peter Lang.

Wuorinen, Charles. 1971. "Are the Arts Doomed on Campus?" *The New York Times* August 8, D11.

Zuckerman, Gabrielle. 2002. "An Interview with Milton Babbitt." *American Public Media*
http://musicmavericks.publicradio.org/features/interview_babbitt.html
(Accessed July 22, 2013.)